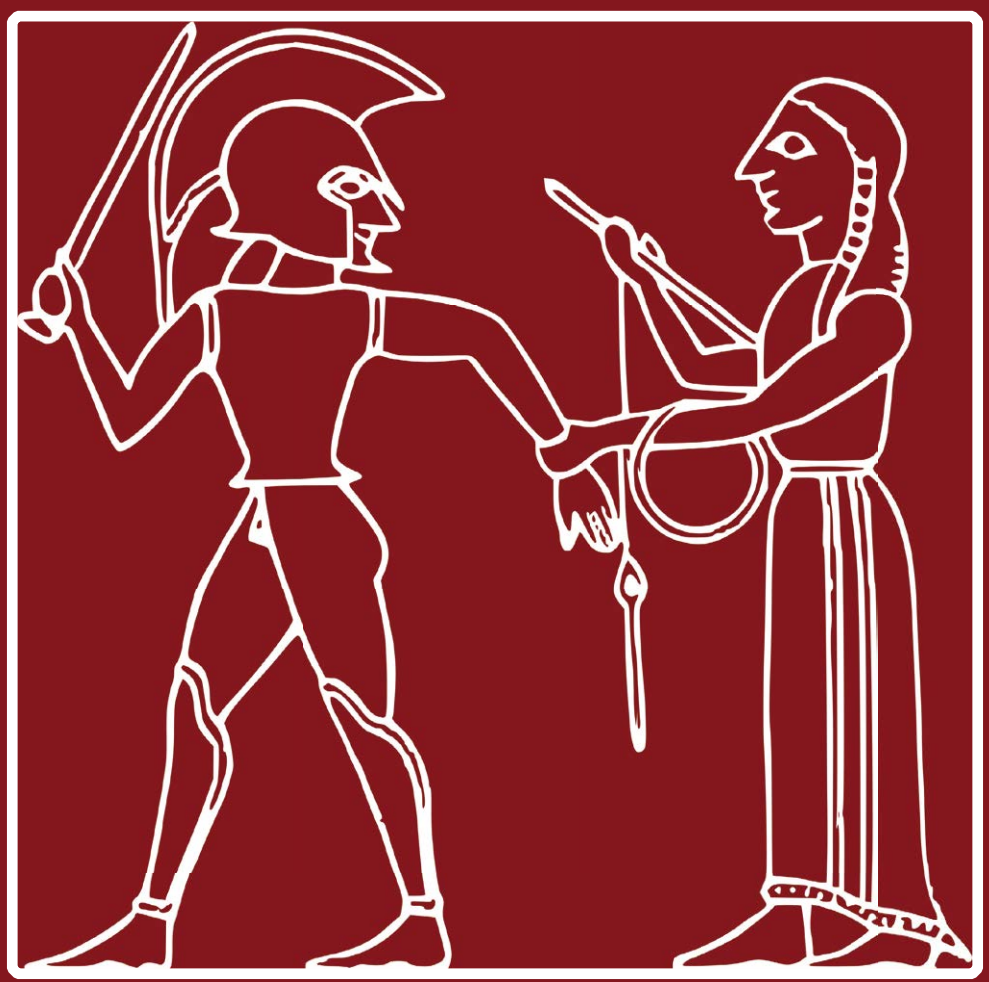
Textiles and War in Europe and the Mediterranean from Prehistory to Late Antiquity

Proceedings of the International Conference held at the Institute for Advanced Studies in Levant Culture and Civilisation in Bucharest, Romania, 17-19 May 2023



Edited by

Liviu Mihail Iancu and Francesco Meo

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Cover: Archaic Greek male warrior and female spinner (Helen?), reworking by Liviu Mihail Iancu of the drawing of a scene on a sixth-century BC Argive shield-band from Olympia, published in Emil Kunze, *Archaische Schildbänder. Ein Beitrag zur frühgriechischen Bildgeschichte und Sagenüberlieferung* (Olympia Forschungen 2), Berlin, Walter de Gruyter, 1950, pl. 20, V b.

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Introduction

The idea of a conference and a volume on the general topic of textiles and war emerged early in 2021, during one of the first meetings of Working Group 4 'The Fabric of Society' of the research network *Europe Through Textiles: Network for an integrated and interdisciplinary Humanities (EuroWeb)* (ID Grant n. CA19131), established between 2020 and 2024 with financial support provided by COST (European Cooperation in Science and Technology), a European funding agency for research and innovation networks. Despite the group members' many distinct approaches to the field of prehistoric and ancient textiles, there was consensus that the topic is still largely unexplored and even more so from a systematic perspective.

As a military historian interested in the numerous and complex connections between ancient armies and the world of textiles and as an archaeologist who worked extensively with ancient textile production tools containing references to martial themes, we set out on this endeavour meant to bridge the gap between scholars specialised in the venerable yet somewhat quiescent academic field of war and warfare studies and those with expertise in the more recent but fast-developing and vibrant area of textiles research. Besides deepening knowledge in both domains, our main aim was to explore the opportunity to establish a new and well-defined direction of academic investigation.

Certainly, there are a few previous contributions that led to significant results in the area of the use of textiles (and sometimes leather)[1] in prehistoric and ancient warfare. We could mention, for example, *Roman Military Dress* (2009), by Graham Sumner, based on three previous smaller volumes, and *Wearing the Cloak: Dressing the Soldier in Roman Times* (2011), edited by Marie-Louise Nosch, which focused on – but were not restricted only to – the use of textiles and the martial costumes in the historically unique military organization that was the Roman army. These volumes are just the tip of an iceberg of independent papers that dealt with different series of data out of the large amounts still recoverable mainly from the time of the Empire, often concentrated conveniently in the pages of the *Journal of Roman Military Equipment Studies*,[2] and whose results were partly synthesised throughout M.C. Bishop's and J.C.N. Coulston's *Roman Military Equipment: From the Punic Wars to the Fall of Rome* (1st ed. 1993, 2nd ed. 2006).

Of note is also Susan Möller-Wiering's *War and Worship: Textiles from 3rd to 4th-century AD Weapon Deposits in Denmark and Northern Germany* published as well in 2011 in the Ancient Textiles Series. The expansion beyond the Mediterranean, in Northern Europe, and the emphasis on archaeological textiles as sources for recreating various aspects of ancient war and warfare can be counted among the merits of this work that opened a new path in studying ancient military textiles and dress.

Beyond these examples, and excluding works focused on the specific issues of linen corselets as pertaining more to the field of arms and armour,[3] most contributions to this research topic are in fact represented by scattered information in publications dealing with military history and archaeology,[4] studies of ancient dress that sometimes touches on the costumes used by the military,[5] technical analyses of archaeological textiles, published without having as their primary focus the evaluation of their connection to warfare,[6] and miscellaneous epigraphic and philological works.[7]

Our attempt to incentivise the more autonomous research of the textiles items used or manipulated by prehistoric and ancient armed groups revolved around two main directions. The first direction was to delineate the main sources and methodologies susceptible to providing significant results, starting by sketching a map of the current state of the research in the field. The second direction was topical and dealt with highlighting a few relevant themes that could be tackled, such as particular studies on specific textile items used in the military field (e.g. sails for warships and metal armour linings), the systems of production and acquisition of garments and other textile materials

[1] For the use of leather in pre-modern warfare, see Mould 2017, which includes only two papers about leather items from the ancient Roman Empire out of 17 contributions.

[2] van Driel-Murray 1990; Coulston 1991; Bishop 1992; Aurrecochea Fernández 1999; Hoss 2016; Ivleva 2016; Pásztókai-Szeőke and Paetz gen. Schieck 2016 etc.

[3] E.g. Aldrete *et al.* 2013.

[4] We provide two random examples. First, Launey's monumental book on ancient Greek Hellenistic armies unexpectedly features two valuable pages on the hair and sinews strings used for the Athenian torsion artillery in the 4th century BC (Launey 1949-1950: 830-831). In a similar manner, but much more recently, a comprehensive study on the adoption of the *lorica hamata* by the Roman troops includes a helpful overview of the textile *subarmalis* worn underneath (Devereaux 2022: 154-155).

[5] E.g. Lee 2015: 110-111, 126.

[6] E.g. Beck *et al.* 2014.

[7] See for example the aetiological and terminological discussions in Roussel 1941 and Gauthier 1985: 154-158.

for the armies, the expression of military rank and status through textile items, the economic and cultural effects of military campaigns in the field of textiles acquisition and consumption.

Unfortunately, several colleagues who attended the conference held in Bucharest at the Institute of Advanced Studies in Levant Culture and Civilisation in May 2023 were unable to send their contributions for publication. Nonetheless, the 12 papers collected in this volume out of a total of 18 bear evidence, in our opinion, supporting the validity of the view that we put forward in the beginning. Even more so, we were thrilled that quite a few other scholars rallied to our initial call after the event, expressing their interest in this academic endeavour. Ultimately, we were able to add to this book a thirteenth study written by Maureen Carroll.

The volume opens with Margarita Gleba's helpful review of archaeological textiles used for war, starting chronologically with the Chalcolithic Iceman Ötzi's equipment and ranging geographically from the British Isles to Northwest China and from Northern Europe to Egypt. Her paper not only demonstrates that prehistoric and ancient warfare was inconceivable without the wide variety of military textile and leather items, but also sows the seeds of hope that through a more systematic and thorough study of the constantly expanding corpus of archaeological textiles, new facets of military activities of the past will emerge.

A strong example of this point is provided by the next two papers, focused on the archaeological evidence for the organic components – primarily textiles and leather, but also basketry items – employed together with or attached to metal armour.

Based on a detailed survey of pre-Roman Mediterranean and Pontic cuirasses, gorgets, armguards, greaves and helmets, Raimon Graells i Fabregat aptly shows that the effectiveness of armour greatly depended on such items as skins, linings and paddings, whose existence can most often only be deduced from the preserved metal remains. However, the quest for adequate protection did not result in unique solutions: the variability of local technological and cultural factors led to an equally diverse range of responses to the general issues of providing comfort to the wearer and maximal resistance to the armour.

Similarly, in their paper on Imperial Roman helmets, Fabio Spagiari and Elisabetta Malaman reach the conclusion that different padding systems were employed at various times and in various places – sometimes even at the same time and in the same place, as shown by the finds from Mons Claudianus – for these essential protective pieces of military gear. Based on the various organic remains preserved to this day, they are also able to plausibly hypothesise about the main raw materials used for padding and lining, as well as the important role that reuse and recycling played in their manufacture.

The effectiveness of another archaeological approach, based on a different set of data, is tested in the paper co-authored by Francisco B. Gomes, Teresa Rita Pereira, Carlos Pereira and João Pimenta. By closely examining the spindle whorls and loom weights discovered in several Late Republican sites from Western Iberia with varied military functions – from Roman military camps and militarised indigenous settlements to small forts and newly founded settlements with a strong military presence – this team of researchers is able to demonstrate how pervasive can be the impact of military needs over the human communities established in a certain region in the field of textiles production and acquisition. At the same time, they add valuable insights on the wide range of solutions adopted by Late Republican Rome for supplying its military units stationed far abroad with suitable clothing.

Equally informative are the remnants of textiles from different archaeological sites in the fortunate cases when they are preserved. Orit Shamir's paper discusses such finds from a broad array of archaeological sites in the southern Levant: on the one hand, the last pockets of resistance of the Jewish rebels from the Judean desert during the revolts against the Romans of AD 66-73 and 132-135, on the other hand, the thriving Nabatean way-stations on the trade routes that linked the Arabian Peninsula and the Red Sea to the Mediterranean Sea. The comparison of the textile fragments from these two types of locations reveals once more that military activities may heavily impact the textile production and consumption behaviours of human communities. Whereas the textiles found in the peaceful Nabatean sites only rarely show traces of patching, similar items from the Masada, the Cave of Letters and other places in the Judean Desert exhibit repeated patching and several forms of reuse, unmistakable signs of the hardships endured by the besieged.

The contribution of written sources to the study of military textiles and leather items is emphasised in Liviu Mihail Iancu's chapter, who tackles the issue of clothing, tents, ship sails and cables taken as booty or paid as tribute by the Greek and Roman armies in the first millennium BC. Despite the scarcity of evidence, it is shown that loot and tribute were deemed significant supply sources of such items even for the small raiding parties of the Dark and Archaic ages. Their importance did not cease to increase as the complexity and duration of military operations grew in the later part of the first millennium, marked by large hegemonic wars between major Mediterranean powers.

Starting as well from written sources, more precisely from a well-known passage where Livy recounts the establishment of the Samnite *legio linteata* in 293 BC, Gianluca Tagliamonte assembles a compelling dossier of literary, archaeological and iconographic evidence showing that linen played a significant role in Samnium both in equipping troops with clothing and well-lined armour and in religious and civil contexts. Therefore, he plausibly hypothesises that the inhabitants of ancient central Apennine Italy were major growers of flax and producers of fine linen.

Three more papers deal with pre-Roman central and southern Italy, gradually shifting the focus in the second half of the book from archaeological and written sources to the iconographic evidence for the military use of textiles.

Francesco Meo's discussion of the garment wrapped around the seven belts found in the early fourth-century BC Tomb 382 in Ordona against the visual evidence provided by earlier anthropomorphic Daunian stelae erected both for men and women provides significant arguments for rejecting the interpretation that this part of the funerary assemblage was meant to emphasise the martial prowess of the deceased. Instead, it is regarded as a symbol of the high status of the individual buried at Ordona, following deeply entrenched Daunian traditions.

On the other hand, Maureen Carrol's diligent study of the fourth-century BC tomb paintings from Campania and Lucania featuring the motive of the *ritorno del guerriero* reveals just how important clothing was for expressing the martial ethos of the Italic elites in these regions. As the diverse colours and patterns of the short tunics worn by warriors were seemingly important means for expressing their identity, triumphantly carrying back from the battlefield such blood-splattered garments, together with the stripped enemy armour, was a crucial symbol of success in war and became worthy of being visually recorded in funerary representations.

Garments were masterfully employed as polysemic details in vase painting in southern Italy, decisively contributing to conveying meaning in battle scenes, as demonstrated by Carlo Lualdi in his paper devoted to the analysis of a proto-Lucanian red-figure *hydria* from Tomb 2/1994 of Gravina-Botromagno, in Peucetia. The attire of the ten warriors depicted on the large battle scene on the upper register of the vessel serves not only to better discriminate between the opponents, but also to draw a connection between the depicted heroic figures and the Peucetian elites, thus playing a part in celebrating the values of the local aristocracy.

The last three papers in this book also take different approaches to the interpretation of iconographic sources, but focus instead on the military dress in the Roman Empire.

Adrián Gordón Zan employs the evidence of visual representations of third-century AD emperors, projected on the background provided by literary sources such as Cassius Dio and *Historia Augusta*, to describe and explain the gradual adoption of military clothing, such as long-sleeved tunics, trousers and *paludamentum-sagum*, in the public images of the *Augusti*. Not surprising at all given the crucial role that the army played in the election of emperors during this troubled century and their constant need to cultivate the troops' loyalty, this phenomenon whose inception can be traced back already to the end of the Antonine period and is fully accomplished under the Tetrarchy would have still remained largely elusive without the precious evidence brought by several numismatic issues.

A more specific study is the one devoted by Philip Kolev to a set of 21 funerary stelae from the Middle Strymon Valley, in the Roman province of Macedonia, dated to the 3rd century AD. The people depicted on the stelae, dressed in short-sleeved chitons or long-sleeved tunics, animal skin cloaks fastened with circular rings and leather boots and holding axes, pickaxes, rods (or bars), spears and javelins, have long been thought of as Roman soldiers or Thracian warriors, but the author concludes, based on the singularity of their clothing and the predominance of the tools over the weapons that they were instead professionals of a yet unidentified kind who may have also secondarily functioned as guardsmen.

Another microregional study, signed by Ergün Laflı and Maurizio Buora, discusses the peculiarities and the northern Mesopotamian commonalities of the military garb of the elites in Edessa during the Roman rule over the kingdom of Osrhoene in the 2nd and 3rd centuries AD, starting from six statues preserved in the Archaeological Museum of Şanlıurfa. It is shown that the various cultural contacts in the area between the Parthians, the Arabs, the Greeks and the Romans are reflected in the local military costume and that despite a certain regional uniformity in the representations from Edessa, Hatra, Dura Europos and Palmyra, specific details were determined by the existence of local fashions in these important regional centres.

It would be inappropriate to assume that the present collection of papers offers a fully comprehensive map of the approaches that can be taken and the topics that can be dealt with in the study of the intricate relationship between textiles and war in prehistory and antiquity. If we merely recall the regrettable absence from the book of a few papers read at the conference in Bucharest, it becomes obvious of how much larger and promising is

this field for whose more autonomous research we are advocating: Emil Nankov examined the varied evidence for the plant fibres and leather components of slings; Kerstin Droß-Krüpe and Iulia Dumitrache demonstrated how much precious information on the public and private supply of clothing to the Roman Imperial army can be extracted from the unparalleled epigraphic and papyrological corpus dealing with the Roman military; Paulina Lebiedowicz aptly showed that iconography is a precious resource not only for studying military costumes, but also for the reconstitution of more technical issues, such as aspects related to the sails and cordage of ancient Greek ships; Alina Iancu brought to attention the existence of quite numerous war-related motives and representations on ancient textile tools such as spools, loom weights and *epinētra*; Amine Hadj Taieb detailed some of the modern analyses that could be used for making more accurate assessments of the technical properties of the ancient textile items employed by the Carthaginian army.

Nevertheless, it is not too hazardous to state that the current volume is representative of the main research trends that contribute to the expansion of knowledge in this field. Iconographic studies, mainly of military dress, still represent the majority of scholarly attempts to explore the use of textile items in the war-related sphere of human existence. Nonetheless, the rapid developments in the recognition, recovery, preservation and research of archaeological textiles and textile tools, coupled with the expanding array of available scientific analyses for the study of archaeological artefacts and particularly old organic remains, determines a steadily increasing number of valuable contributions mainly based on archaeological sources. When available, written sources are extremely precious for contextualizing and supplementing the iconographic and archaeological information, but their overall scarcity lead to a lower share in the total number of studies pertaining to the topic of textiles and war. Of course, discovery and reading of new relevant epigraphic and papyrological documents can always bring a surge of information of invaluable significance.

In the end, we are certain that this field will continue to grow quickly. At the same time, we hope that the present book will serve as a stepping stone for this research direction to be expanded even faster and more systematically.

There are many people and organizations which contributed in various ways to the final outcome represented by this volume. We think that appropriate credits should be given in the first place to Marie-Louise Nosch, the main aggregator of the EuroWeb interdisciplinary research network, an initiative that stimulated the inception and development of numerous projects like ours. Our gratitude goes as well to Agata Ulanowska, the chair of EuroWeb, as well as to all the members of the Management Committee of the network who agreed to support the organization of the 'Textiles & War' conference in Bucharest, that benefitted of generous funding from COST. We are thankful to all fellow researchers who positively answered our call for papers and consequently participated in the conference and/or contributed to this volume. Margarita Gleba and Raimon Graells i Fabregat deserve special mentions here as they agreed to prepare engaging keynote lectures.

The organization of the conference in Bucharest would have never been possible without the tremendous dedication of our colleagues from the Institute for Advanced Studies in Levant Culture and Civilisation and the steady support of its founder and president of its scientific council, Professor Emil Constantinescu, former president of Romania between 1996 and 2000. We are indebted to all of our colleagues who were involved in the peer review process and the proofreading of the papers, as they brought highly welcome improvements to the book. It is needless to say that the full responsibility for any shortcomings belongs to the contributors and the editors. We are immensely thankful as well to Gabriel Grigore and Trident Pharma Ltd. for their financial support of the conference and the book, to Marian Stoian and the Eurocentrica Association for the management of these funds and to Archaeopress for their patience and willingness to assist this editorial project.

Last, but certainly not least, we express our warmest gratitude to our affectionate and understanding families.

Liviu Mihail Iancu, Francesco Meo

Abbreviations

Throughout the volume, abbreviated references to texts from classical Antiquity follow the guidelines of the *Oxford Classical Dictionary* (4th edition, 2012).

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Textiles for War: Archaeological Evidence and Approaches

Margarita Gleba
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Abstract: Textiles – understood in the broadest sense of the word to include various structures produced using natural fibres – and leather have been used for war since the Palaeolithic: as strings to attach arrowheads to their shafts, as garments and defensive armour components for the warriors, as shelters to house them, and as sails to carry them across the sea. In certain historical periods, enormous quantities of textiles were produced for war, requiring substantial material and human resources as well as time. Yet, we have only very limited archaeological evidence of textiles used for war. In order to extract the maximum information from these precious remains, a combination of diverse multidisciplinary approaches must be used. This paper reviews some recent case studies, which identified textiles used for war in diverse chronological periods and geographical settings and proposes some avenues for future research.

Keywords: armour, clothing, economy, sails, strings, tents, warfare

War

When and why did wars originate? Brian Ferguson, a professor of anthropology at Rutgers University-Newark argues that 'The preconditions that make war more likely include a shift to a more sedentary existence, a growing regional population, a concentration of valuable resources such as livestock, increasing social complexity and hierarchy, trade in high-value goods and the establishment of group boundaries and collective identities. These conditions are sometimes combined with severe environmental changes.' He continues, however: 'But those conditions and the warlike cultures they generate became common only over the past 10,000 years – and, in most places, much more recently than that.'[1] Indeed, despite the prevalence of rock art during the Upper Palaeolithic, one of the earliest iconographic depictions of a battle between two groups of people is depicted in the Neolithic Els Trocs cave (Sant Feliu de Veri, Bisaurri, Huesca) in the Spanish Pyrenees.[2] It is also only over the past 10,000 years that humans started using textiles extensively, and textiles became indispensable for war.

The need for textiles in war is as important as ammunition, as a quick look at some of the headlines during the ongoing Russian war against Ukraine demonstrates,[3] and similar problems existed in the past.

A standard soldier's uniform today includes: shirts, trousers, underwear, socks, gloves, boots, waterproof jackets, winter jackets, tactical belts, balaclavas, knee protectors, armbands, bags and more. All of these items require substantial quantities of textiles – for example, the MM-14 uniform of a modern Ukrainian soldier, that is just the basic set of trousers and jacket, requires 3.6 meters of cloth.[4] Snipers and reconnaissance soldiers also need a *kikimora* – a camouflage ghillie suit, which varies with the type of terrain and the time of year, and is often produced from reused textiles. Then, there are sleeping bags, bedding, tents, cots, mats, bags and backpacks, truck covers, camouflage nets for concealing the trenches and equipment, dressing and bandages and, of course, flags. For the purposes of the discussion that follows, all of these are subsumed under the general umbrella of 'military textiles'.

While ancient soldiers may not have required so many different textile elements, many of the same functions and others have been in existence for thousands of years. Our evidence for this comes indirectly from iconography and written sources, but also directly – from archaeology. The aim of this contribution is to explore how archaeological textiles can contribute to the field of military studies in the past.

I will start by quickly reviewing the contexts in which textiles survive and the methods that are used to analyse them. This will be followed by an overview of the diverse military textiles that have been recovered archaeologically and several case studies illustrating the kind of data textiles and related materials can reveal to advance our understanding of military activities in the past.

[1] Ferguson 2018.
[2] Alt *et al.* 2020.
[3] E.g. Lederman and Flanagan 2022; Hankewitz 2022; Vaišvilaitė-Braziulienė 2024.
[4] People's Project 2021.

Preservation

Using Susanna Harris' broad definition,[5] under the term 'cloth' I include not just the 'classic' loom-made textiles, but also those produced by various other techniques, as well as leather and skin. All these materials are hugely underrepresented in archaeological record and this is primarily due to their perishable, organic nature. Their preservation requires particular conditions and these can be aridity, high concentration of salt, permafrost, waterlogging, charring or mineralisation, to name the most important ones. These conditions can preserve textiles in contexts such as burials (probably the main type of context in which textiles usually survive), settlements (for example, burnt down Neolithic settlements of Alpine lakes in Switzerland),[6] rubbish heaps (Roman military outposts in Egypt),[7] glaciers (the Chalcolithic mummy of Iceman known as Ötzi recovered in the Italian Alps),[8] salt mines (Hallstatt in Austria),[9] shipwrecks,[10] etc. The fact that the contexts in which 'military textiles' are likely to survive (such as battlefields or military barracks) are relatively uncommon, makes their recovery extremely rare, but there are some examples. Roman military forts and city quarters at sites such as Vindolanda in the UK,[11] Masada in Israel,[12] Dura Europos in Syria,[13] and various sites in the Eastern desert of Egypt[14] have produced important corpora of military textiles. Significant assemblages of textiles were also found in the Roman Iron Age weapon deposits from the bog sites of Thorsberg in Germany and Nydam, Vimose and Illerup Ådal in Denmark.[15] They had been worn by the defeated foreign warriors during the battle and were used as sacrificial offerings to the gods, together with the weapons, which appear to have been wrapped in these garments.

Methods[16]

When we do find textiles in archaeological contexts, we have a wide, multidisciplinary array of methods at our disposal to analyse them. These include the macroscopic analysis of textile structure, which encompasses determination of the type of weave, thread count, diameter, spin direction and tightness of the threads used in warp and weft, as well as other technical characteristics such as borders, selvedges and decorative elements. The characterisation of the raw material, that is the fibre, is usually achieved through microscopic analysis of textiles using Transmitted Light or Scanning Electron Microscopy. More sophisticated methods include DNA or proteomic analysis. High Performance Liquid Chromatography can furthermore help determining dyes, mordants and other substances used to colour or treat fibres. The absolute date of archaeological textiles can be obtained using AMS radiocarbon dating. And, in some cases, it is even possible to determine whether the textile is made of local or non-local raw materials, that is to determine its provenance, using strontium or stable isotope systems.

All these methods allow us to characterise the textile and to determine how, when and where it was made. It is the contextual analysis, however, that is the key to the interpretation of the textile's function – in other words, to answering the question why the textile was made. The use of written and iconographic sources in combination with archaeological evidence often expands the interpretation of the latter, and many of the contributions in this volume provide examples of this approach.

Military textile uses

Strings and cords

If we look at the specific functions of textiles for war, probably the earliest can be connected with the use of strings and cords, which already in the Palaeolithic started to play an increasingly important role in human everyday life. Plant fibres and animal sinew were fundamental in the development of composite technology, i.e. anything that is 'made up of disparate or separate parts or elements'.[17] Weapons such as spears and arrows with stone heads would be unthinkable without hafting, and occasionally string survives to show us how the separate elements were combined. Thus, Chalcolithic Iceman Ötzi's copper axe blade is fixed into the forked shaft of the haft with birch tar and is tightly bound with leather straps to hold it firmly in place, while his flint dagger blade was inserted into the wooden handle and bound with animal sinew.[18]

Cordage was also fundamental for the construction of, for example, bridges to ford the rivers, of catapults,[19] of temporary shelter, cranes, ship rigging, shoe laces or any purpose where tying of things was required.

[5] Harris 2012.
[6] Rast-Eicher and Dietrich 2015.
[7] E.g. Bender Jørgensen 2018.
[8] The constantly updated bibliography can be found in the Iceman Database (https://www.iceman.it/en/database/).
[9] Grömer *et al.* 2013.
[10] E.g. *Mary Rose*: Forster *et al.* 2005; *London*: Gleba *et al.* 2023.
[11] Wild 1979; Wild 1993.
[12] Sheffer and Granger-Taylor 1994.
[13] Pfister and Bellinger 1945.
[14] E.g. Dydimoi: Cardon *et al.* 2011a; Mons Claudianus and Abu Sha'ar: Bender Jørgensen 2018; Berenike: Wild and Wild 2018.
[15] Möller-Wiering 2011.
[16] Overview in Gleba 2018.
[17] Hardy 2008.
[18] Egg and Spindler 2009.
[19] Evidence of actual remains in Hendriks 2010.

Clothing

The use of string on a human body also goes back to the Upper Palaeolithic, as does the earliest evidence of twined fabrics,[20] while loom-woven textiles appear during the Neolithic period.

Just like the rest of the past societies, warriors and soldiers needed clothing. However, as today, their clothing likely required specific characteristics – they had to be comfortable, durable and provide protection in diverse weather conditions and hostile environments.[21] Occasionally, we can identify soldiers in archaeological contexts due to the presence of textiles unusual for these contexts – unusual for their material, type of weave or decoration. Examples come in particular from the Roman times, such as fragments of dark wool cloaks woven in twill weave that have been associated by researchers with military rather than civilian garments. They have been recovered on the hilltop fortress of Masada in Israel,[22] and in the rubbish heaps of the Roman military sites in the Eastern desert of Egypt, such as Mons Claudianus.[23] Certain decorative motifs have been identified as insignia of rank, as suggested for the arrow-striped *clavi* and pyramid-shaped shoulder ornament, which have been read as symbols of a Roman officer in Palmyra, in Syria, in the late 2nd and 3rd century AD.[24]

While textiles are rarely connected with military use as garments due to the fact that they rarely differed from the everyday clothing, certain other elements of military attire leave little doubt as to their purpose when recovered archaeologically. Thus, the leather belt with its distinctive metal elements[25] and the hobbed sandals (*caligae*)[26] served as military identifiers in Roman times.

Armour

Clearly intended for war (or at least violence as in the case of hunting) is defensive body armour. Linen corselet (the *linothōrax*) provided similar protection to bronze, but it had the advantage of being lighter and cooler – an ancient equivalent of modern Kevlar.[27] Some form of linen armour was worn by soldiers across Greece, Etruria, as well as Egypt and farther east, as documented in written and iconographic sources from at least the 8th century BC onwards. Corselets plausibly made of linen are depicted on pottery in Greece and in a variety of media in Etruria from the 6th century BC onwards. No actual example of a *linothōrax* has been found,[28] but fragments of possible linen *pteryges* from a linen corselet have been identified at Masada in Israel, *terminus ante quem* AD 73/74.[29] At Dura Europos, a linen shin guard dating to the 3rd century AD was recovered (Figure 1).[30] Its edgings of red leather indicate that the red decorative patterns observed in iconography may in fact represent such elements. Their twined construction technique has generated a debate as to the method of linen armour production.

Figure 1: Linen shin guard with leather elements, Dura Europos, Syria, AD 200-256. Yale University Art Gallery Acc. No. 1933.481 (photograph: Yale University Art Gallery).

While the *linothōrax* was primarily made of linen, it was occasionally reinforced with metal elements, such as scales. Other types of defensive armour made of non-perishable materials also required textiles and leather. In particular, scale armour was often assembled using

[20] Adovasio *et al.* 1996.
[21] Steffens *et al.* 2019.
[22] Granger-Taylor 2008: 15.
[23] Bender Jørgensen 2018.
[24] Paetz gen. Schieck 2012.
[25] Hoss 2012.
[26] van Driel-Murray 2001.
[27] Gleba 2012; Aldrete *et al.* 2013.
[28] Some may have survived in Macedonia, although the material has not been published to date.
[29] Granger-Taylor 2012: 56-69.
[30] Granger-Taylor 2012: 68-71.

Figure 2: Textile backing of scale armour, Baumgarten a. d. March, Austria, AD 120-260 (photograph: Naturhistorisches Museum Wien, Project DressID).

linen thread or even sewn onto a linen or/and leather support.[31] Examples are known from across the UK,[32] Austria,[33] and Syria (Figure 2).[34] Not only soldiers, but horses were also occasionally protected using this method, transforming them into an ancient equivalent

[31] An overview of scale armour during the Iron Age is in De Backer 2012.
[32] Wild 1981.
[33] Grömer 2014: 165-167, 174-175, 222-225.
[34] Frisch and Toll 1949; James 2004; Granger-Taylor 2012: 71.

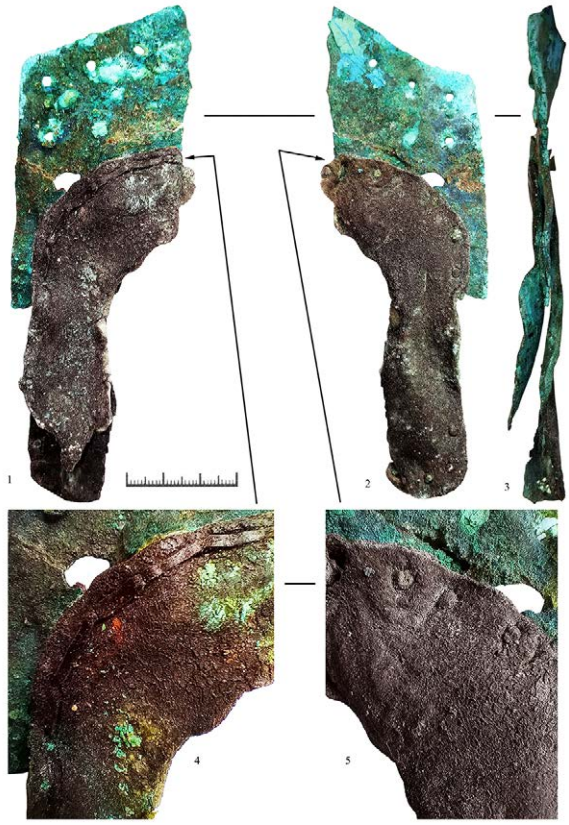

Figure 3: Leather greave lining, Vodoslavka kurgan 6, Ukraine, 4th century BC (photograph: M. Daragan, reproduced with permission).

of an armoured vehicle. A complete scale horse armour set was recovered at Dura Europos in Syria.[35]

We also have evidence of leather scale armour: recently an almost complete set dating to the 8th-6th century BC was discovered in a fourth-century BC burial in China, although it was likely produced in Mesopotamia.[36] Leather was likewise used in the construction of lamellar (*lorica segmentata*),[37] muscle and other types of armour.[38] A spectacular parade armour set made from crocodile skin was found in Egypt and is currently in the British Museum.[39]

Furthermore, fully metal defensive armour required lining and padding. Helmet liners (for which old textiles could be reused as in the case from Didymoi in Egypt[40]) are discussed by Fabio Spaggiari and Elisabetta Malaman in this volume. Even metal greaves were lined at times, as in the case of an example recovered in a Scythian grave lined with leather (Figure 3).[41]

Textiles and leather were also used in the construction of shields.[42] The Bronze Age shield from Clonbrin (Ireland) has been primarily constructed from boiled leather (*cuir bouilli*).[43] North European shields dated to the Pre-Roman Iron Age and Viking Age on the other hand incorporated hide products to reinforce the wooden shield board and its edge, with cattle hide being common material.[44]

Medical use

When the defensive armour did not perform its intended function properly, medical textiles were needed: dressing, bandages and surgical suture thread. A list of medical supplies is preserved in the papyrus P.Masada 723 from Masada dated AD 73/74.[45] Cleaning of the wounds could be done with sponges. Galen described the use of silk and catgut for sutures of wounds predominantly received in battles in *c.* AD 150.[46] The well-known Attic red-figure vase from Vulci, Italy, dated to *c.* 500 BC depicts Achilles tending to Patroclus by dressing the wound with a white (linen?) bandage (Figure 4).[47] Another scene showing one man bandaging the leg of the other, presumably with cloth, occurs on a gold beaker from the fourth-century BC Scythian burial at Kul'-Oba, near Kerch in Crimea.[48] Herodotus mentions that bandages used by the Persian army for wrapping the wounds of a brave Greek warrior were made of *byssus* (fine linen).[49] The medical usage of linen bandages is also described by Galen in *De fasciis*, while Pliny the Elder states that the nap of linen cloths, especially that deriving from ship sails, was used as a medicine.[50] Here, too, we need to keep in mind the possibility of textile reuse. Cassius Dio in his *Roman History* recounts a story of Emperor Trajan cutting up his own clothing to make bandages for the wounded Roman soldiers after a battle with the Dacians in AD 101 or 102, since the supplies were short.[51]

[35] Yale University Art Gallery 1933.680, Frisch and Toll 1949.
[36] Wertmann *et al.* 2022.
[37] Bishop 2002.
[38] For example a leather version of *linothōrax* is also known and examples have been recovered in southern Italy: Montanaro 2019; Montanaro 2021.
[39] British Museum EA5473.
[40] Wild 2020.
[41] Polin and Daragan 2023.
[42] Warming *et al.* 2020.
[43] Coles 1962: 175.
[44] Warming *et al.* 2016.
[45] I thank Kestin Droß-Krüpe for bringing this source to my attention.
[46] *De Methodo medendi*, Book 10.942K. I thank Kestin Droß-Krüpe for finding the precise reference.
[47] Berlin Antikensammlung F2278.
[48] Cunliffe 2019: 332-333.
[49] Hdt. 7.181.2.
[50] Plin. *NH* 19.21.
[51] Cass. Dio. 68.8.2, possibly to be connected with scene XL on Trajan's Column (Cichorius 1896, pl. XXXI), see Vulpe 2002: 52, 244. My thanks to Liviu Iancu for bringing these sources to my attention.

Figure 4: Achilles tending Patroclus wounded by an arrow. Tondo of an Attic red-figure *kylix*, *c.* 500 BC, from Vulci, Italy, Berlin Antikensammlung F2278 (photograph: Bibi Saint-Pol and Mharrsch via Wikimedia Commons).

Weapons

What about the weapons that inflicted the wounds? They, too, required textiles and leather.

A sling – an underestimated type of weapon that is essentially a textile – has been used from very early times if we recall the biblical story of David and Goliath. Actual examples in linen have been recovered in Egypt, for example in the tomb of Tutankhamun dated 1327 BC,[52] and at Lahun dated circa 800 BC (Figure 5).[53] We know from Strabo that slings could be made of rush, animal hair and sinew, as well as of leather.[54]

Storage containers for the protection, organization and transport of various types of offensive arms are another category of military equipment that required textiles and leather. From early on, there came a realisation that sharp blades have to be safely stored and protected in order to both not inflict unnecessary damage to their owner and to protect their functional characteristics. Already the Chalcolithic Iceman kept his stone knife in a sheath made of lime tree bast.[55] Later, bronze and iron blades were always kept in sophisticated scabbards, composite objects often made of wood, leather and textile.[56]

Quivers, containers for storing and carrying arrows, are also known since at least the Chalcolithic period: Iceman's arrow case was made of roe deer skin.[57] Quivers were a particularly indispensable attribute

[52] Wernick 2014.
[53] Granger-Taylor 2012, 73ff.
[54] Str. 3.5.1-3.
[55] Pfeifer and Oeggl 1990.
[56] See recent overview in Volken and Goubitz 2021.
[57] Groenman-van Waateringe *et al.* 1992; O'Sullivan *et al.* 2016.

Figure 5: Sling (with sling shots that may not have been used with it), Kahun, Egypt, Manchester Museum Acc. No. 103 (photograph: courtesy of Manchester Museum, The University of Manchester).

Figure 6: Leather quiver with arrows, Bulhakovo kurgan 5 burial 2, Ukraine, 4th century BC (photograph: M. Daragan, reproduced with permission).

of nomadic warriors.[58] Thus, recent analyses using palaeoproteomics have demonstrated that quivers of Ukrainian steppe Scythian warriors were primarily made of skins of domesticated species such as sheep, goat, cattle and horse in the 5th-4th century BC (Figure 6). The surprise discovery is the presence of two human skin samples, which for the first time provide corroboration to the Greek historian Herodotus' claim that Scythians used the skin of their dead enemies to manufacture leather trophy items, such as quiver covers.[59]

Housing

Besides being dressed, protected and equipped, soldiers also needed to be housed, particularly during long marches, sieges and temporary deployment. Tents are mentioned in literary sources and shown in

[58] Daragan 2020.

[59] Brandt *et al.* 2023.

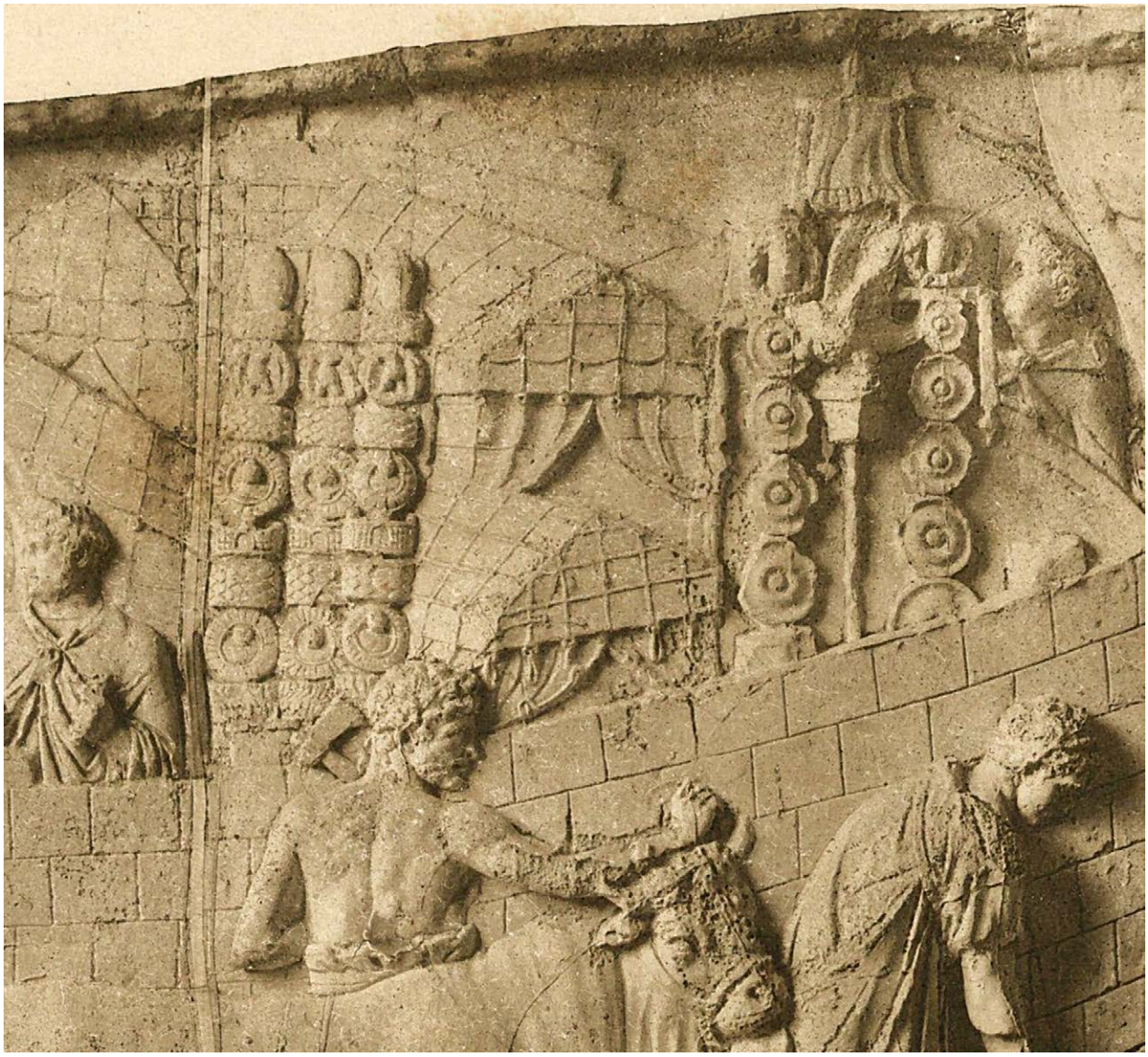

Figure 7: Detail of Roman tents in the first encampment scene on Trajan's Column, Rome (dedicated AD 113). Cast of the original in the Museo della Civiltà Romana, Rome. (photograph: after Cichorius 1896, scene VIII, pl. X).

iconography, for example on the Column of Trajan in Rome completed in AD 113 (Figure 7),[60] but we also have actual examples of leather tents from Roman Britain.[61] We can also imagine the use of bedding, mattresses and other furnishings, foldable chairs and cots, especially for higher ranks.

Transport

Warriors and certain military ranks also needed to be transported. The equestrian warriors are associated with particular garments, such as trousers.[62] The harness and the saddles were made from textiles or felt, as well as leather. Some of the earliest leather saddles were recently excavated in a mid-first-millennium BC burial in Northwest China.[63] These are similar to the saddles recovered from the Scythian burials in Russia.[64] A well-preserved leather saddle is also known from Vindolanda in the United Kingdom.[65] Chariots also required these materials, as did the carts transporting supplies or the wounded.

[60] Also in depictions of Assyrian military campaigns, see Micale and Nadali 2004.
[61] van Driel-Murray 2017.
[62] On the earliest trousers, see Beck *et al.* 2014.
[63] Wertmann *et al.* 2023.
[64] Stepanova 2021.
[65] Connolly and van Driel-Murray 1991.

Figure 8: Sail fragment from Berenike Inv. No. 97.103 (photograph: courtesy of John Peter Wild).

Sails and caulking

But probably the most extensive military use of textiles was in the navy as sails. Most sailboats would have had a single square sail, furled and unfurled using brails, as shown by images and references to ships from the Bronze Age onwards, but larger ships also had a foresail.[66]

Sailcloth from historical periods rarely survives on land and even less frequently in water. We hence have very little direct evidence about sail construction and raw material. Some of the oldest possible sail remnants survive in the Mediterranean. Possibly the earliest are linen fragments that were torn and used to wrap a mummy from a grave in Thebes, Egypt, radiocarbon dated to 100-50 BC.[67] First-century AD sail fragments from the Roman port of Berenike on the Red Sea in Egypt were made of cotton and clearly belong to the Indian tradition (Figure 8). Other sail fragments dating to the late 1st-early 2nd century AD are known from another Roman Red Sea port, Myos Hormos: they are also made from Indian-produced cotton and were identified because of a wooden brail ring still attached to one of them.[68]

The need for textiles was so great that sailcloth was extracted as tax/tribute in many cultures. Thus, in 325 BC, Alexander the Great ordered the Cypriot kings to provide the copper, tow and sails (*stuppamque et vela*) necessary for a fleet of 700 ships;[69] in 205 BC, the city of Tarquinia in central Italy manufactured linen sails for the ships of Publius Scipio either voluntarily or as a levy;[70] while in Viking and medieval Scandinavia, coastal districts were required to build, staff and equip a ship, including making the sails.[71]

Further textiles were required for waterproofing the hulls of ships and boats. The conservation of a Roman barge from the 2nd century AD in Lyon, France, recovered 26 linear meters of caulking material.[72] Some hulls were sewn together, requiring further lengths of yarn.[73] For the *Gyptis*, a reconstruction of a sixth-century BC sewn fishing boat, that amounted to about 5 km of linen thread and 3000 hours of sewing.[74] Further rolls of linen cloth were used as wadding to waterproof the joints and to protect the stitches.[75] Similar use is observed in the ship of Comacchio, dated to the early 1st century AD. Calculations suggest that *c.* 20 strips 22 m long and 7.5 cm wide amounting about 33 m^2 of textile were needed for the purpose.[76]

[66] Casson 1971, 36–59.
[67] Wild and Wild 2001; Wild 2002.
[68] Whitewright 2007.
[69] Curt. 10.1.19.
[70] Livy 28.45, with Goldsworthy 2001: 287. My thanks to Liviu Iancu for discussing this aspect with me.
[71] Bender Jørgensen 2022: 160-161.
[72] Meunier and Guyon 2019.
[73] Pomey and Boetto 2019.
[74] Pomey and Poveda 2018: 50.
[75] Pomey and Poveda 2018: 46.
[76] Gleba and Busana 2023.

An extremely rough estimate of the surface of the ships of Nemi – the largest Roman ships known – indicates that to cover their entire under-water surfaces with textile insulation, fragments of which still survive, would require approximately 1400 m^2 of cloth for Ship 1 and 2000 m^2 of cloth for Ship 2.[77]

Of course, all the other ships would have needed somewhere in between these amounts, but if we take into account the thousands of ships that required textiles either for caulking/luting or for insulation, the need for such textiles would have been substantial. In order to ensure the steady and reliable supply of such rags, their collection and distribution must have been somewhat organised. And this brings us to the economic side of the military textile studies.

Military textile economy

Military and sea-faring are two major factors that probably dominated textile consumption in terms of quantity in the Mediterranean during the second half of the 1st millennium BC. What did it take to produce all these diverse types of fabrics for military use? What were the material and human resources needed? While this varied with time and place, archaeological finds and experimental archaeology allow us to get a glimpse of these aspects in certain contexts.

Sails

Navies were instrumental to imperial expansion, the protection of commercial interests and the extraction of tribute and tax and other resources for sustained prosperity of the imperial centre. The significance of fleets to ancient empires has been recognised and studied extensively and it is established, particularly with reference to Athens in the 5th and 4th centuries BC, that the operation and maintenance of fleets required enormous funds and infrastructure.[78]

No sails have been preserved from ancient Greece, but the average technical properties of sailcloth in the Archaic and Classical period can be deduced with relative confidence because archaeological finds of sails from the Roman and later periods demonstrate limited variation in weave structure and density. The known examples from the Mediterranean area are plain tabbies with 7 x 7 threads/cm to 22 x 12 threads/cm, but most values gravitate towards the median of 10-13 threads/cm.[79]

Several reconstructions of ancient sail ships have been made and have proven sea-worthy, so the sizes of their sails give a sense of how much cloth was needed. The *Olympias* was a replica of a 4th-century BC trireme, 36.9 m long and 5.5 m wide, equipped with a main sail of 95 m^2 and the foresail a quarter of its size, or 119 m^2 in total.[80] The dimensions of the *Olympias* sail were determined following 19th-century AD criteria for what was appropriate for the hull. These hull and sail dimensions compare well with the sails made and tested on reconstructions of Viking ships, which have withstood the test of time and of the sea, having sailed from Denmark to Scotland and Ireland and one of them having been used in twenty sailing seasons.[81]

Using these data, we can calculate that equipping a ship like the *Olympias* with its 119 m^2 of sails would require 4299 hours (18 months) of spinning and 2966 hours (12 months) of weaving, or 7265 hours in total.[82] These calculations are only for the minimum amount of material for the sail and do not take into account the sewing of the bolts of cloth together, reinforcements that would have been needed at the ends, webbing strips etc. The quantity multiplies if a ship carried a second set of sails, as did Athenian triremes in the 4th century BC, which were equipped with light and heavy sails.[83] To this we should add a wide variety of ropes, nets and tarps. If making sails for the *Olympias* trireme would take one and a half years of spinning and one year of weaving, the labour and resource requirements for larger fleets would have escalated quickly.

Linen armour

As noted above, armies also needed vast amounts of textiles for clothing, tents, sacks, as well as armour. Plutarch describes Alexander wearing a *linothōrax* for the Battle of Gaugamela[84] (and the famous Alexander Mosaic shows him in one in the Battle of Issos).[85] From another source we learn that, while in India, Alexander received 25,000 new suits of body armour and after he distributed them to his soldiers, the old armour was burned. If the armour was burned, then it was not made of metal, but of organic material: possibly linen and/or leather.

Archaeological finds of the Roman period mentioned above,[86] experimental archaeology,[87] and written sources demonstrate that there is more than one way of making this type of armour, including different techniques of weaving, twining, layering and treating the cloth with

[77] Gleba and Busana 2023.
[78] Gabrielsen 1994.
[79] Dimova *et al.* 2022; also see Iancu in this volume on the cost of sails.
[80] Morrison and Coates 1986: 223-224.
[81] Andersen and Nørgård 2009: 6-7.
[82] Dimova *et al.* 2022.
[83] *IG* II^2 1627.65, 1629.371, 1631.415-17.
[84] Plut. *Vit. Alex.* 32.8.
[85] Museo Archeologico Nazionale di Napoli 10020, originating from the House of the Faun at Pompeii and dated to the end of the 2nd century BC; Cohen 1994.
[86] Granger-Taylor 2012.
[87] Aldrete *et al.* 2013.

different substances in order to strengthen it.[88] But conservative calculations suggest that it would take one to two months to make a single *linothōrax*.[89]

So, to clothe Alexander's soldiers, it would take over 3000 people working full time, for a whole year, to produce 25,000 suits. If the armour was needed quicker, it would take more than 6000 people working full time to produce the same amount within six months. For three months, it would take over 12,500 people, that is textile workers, and predominantly spinners. These very approximate numbers do not take into account domestic production and reuse of old textiles for the purpose, but the exercise gives some idea of the enormous demand for textiles of just this one type.

These numbers suggest that by the Hellenistic period, but likely already earlier, a surplus of the textile items needed for war and navy was likely produced, which could be tapped into when necessary. Cottage industry and taxation in cloth (as is known from the Viking period for the so-called 'legal cloth' – *vadmal*, which was used as a medium of exchange in Medieval Scandinavia) may have been at least some of the mechanisms of such a surplus production. And by the time of the Roman Empire, the need to supply the army lead to the development of complex infrastructure and administration.[90]

Leather Tents at Vindolanda

The next example comes from Roman Britain. Carol van Driel-Murray estimated that 75-77 goat skins were needed to produce Vindolanda Tent III.[91] Each tent housed eight men and a centurion would have had a similar tent all to himself, whereas the soldiers on guard would not have had a tent. A single legion of 4800 men would therefore have needed 46,200 goatskins for tents. And this is not counting: saddles, bags, harnesses, equipment covers, straps, etc. Of course, these are oversimplified calculations, but the point is that, even if a fraction of this amount was needed at any given moment, and considering that it takes around 12 months to tan a skin using vegetable tanning, the supply networks must have been very organised indeed.

Value

Because of their value, textiles could be used for ransom. For example, Priam pays twelve brocaded robes, twelve cloaks, twelve blankets and as many capes and shirts to Achilles to ransom Hector's body.[92] Textiles also constituted an important element of booty taken in war. Large part of the booty taken by Alexander at Granicus and Susa consisted of purple-dyed textiles.[93]

But there is also a different economic side that textiles can help us understand. We know that there was a difference between officers and soldiers in terms of their economic standing, but what could a Roman soldier afford?

At the Roman military fortress Didymoi, located in the Eastern desert of Egypt and dated to the 1st century AD, numerous textile fragments with purple decorations in a variety of purple shades were excavated from the rubbish heaps. More than 17% of samples analysed (11 out of 62) tested positive for shellfish purple.[94] Among ancient dyes, shellfish purple stands in a category of its own. It was arguably the most famous dye of antiquity, associated with kings and highest ecclesiastical orders of many civilisations around the world.[95] Purple dye was extracted from the hypobranchial gland of a variety of marine molluscs, most notably *Hexaplex trunculus* (old name *Murex trunculus*), *Bolinus brandaris* (old name *Murex brandaris*), *Stramonita haemastoma* (old name *Purpura haemastoma*) and other species.[96]

The fact that shellfish purple was identified exclusively in the weft of garment ornaments such as *clavi* indicates that small quantities of purple dyed wool could suffice for the purpose. The papyrological evidence from Roman Egypt includes mentions of weights of purple wool ordered for specific garments. When this information is reconciled with the calculations of purple wool yarn needed to weave the specific ornaments, the estimates suggest that the quantities mentioned in the papyri are not only sufficient but even too high for the purpose.[97] This indicates that low-rank officers and even soldiers in such a far-off place had access to and could afford to use shellfish purple in their garments.

These kinds of data can only be extrapolated from archaeological evidence in combination with experimental studies as well as historical data.

Future perspectives

So where do we go from here? I am not an expert in military matters, but from a textile archaeologist's point of view, there are a few research directions that could provide more information as far as textiles and related materials are concerned.

First of all, a more careful study of metal artefacts, particularly those recovered in burials, for the presence

[88] Gleba 2012: 47.
[89] Dimova and Gleba forthcoming.
[90] Droß-Krüpe 2011.
[91] van Driel-Murray 2017.
[92] Hom. *Il.* 24.272-75.
[93] Plut. *Vit. Alex.*16.18, 36.
[94] Cardon *et al.* 2011b: 200.
[95] Marín-Aguilera *et al.* 2018.
[96] Cardon 2007: 551-606.
[97] Cardon *et al.* 2011b: 207-212.

of organic material traces. In the past, many mineralised textiles were removed during conservation and much valuable data has been lost, so this approach and greater awareness by both excavators and conservators may substantially increase the quantity of military textiles recovered from archaeological contexts. This, in turn, would allow more robust statistical synchronic and diachronic analyses of trends, for example in military 'fashion'. Application of scientific analysis to characterise these finds – such as fibre identification of textiles and species identification of leather using proteomic analysis – would furthermore allow consideration of the economy of procurement and production. Their more precise dating – for example using radiocarbon – would allow us to build more robust use histories. And – when feasible – provenance analysis of both, human remains and textiles, would permit more nuanced conclusions about mobility. A combination of these approaches with experimental archaeology and an accurate comparative study of written and iconographic sources is then needed in order to create a truly holistic approach to textiles used for war and in war. And my only hope is that, someday, we will no longer need them in practice and will only study them in theory.

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Craft, Design and Ergonomics. Decorations, Reinforcements and Protections for Archaic, Classical and Hellenistic Panoplies Between the Mediterranean and the Black Sea

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Abstract: This article presents a general assessment of the organic components of the main defensive weapons used during the Classical and Hellenistic periods, including cuirasses, gorgets, armguards, greaves, and helmets, from an archaeological perspective. The article observes two distinct traditions, Western and Eastern, each with different integration behaviours. One integrates the lining necessary for the use of the protection into the metal, while the other integrates two independent pieces without joining them. To achieve our objective, we have collected several preserved examples of breastplate and helmet linings made of fabric, leather and basketry. We have also paid attention to the metal preparation required for the attachment of such organic elements. This process includes the preparation of peripheral holes for sewing in the organic material, hooks for attaching it, or folds in the metal to hold it in place by pressure. This text aims to provide a general overview of the different configurations of the panoply and the complexity of their construction, rather than serving as a comprehensive catalogue of all the evidence, while also highlighting the importance of cultural understanding for each type of weapon.

Keywords: armguard, armour, cuirass, greaves, fabric, helmet, leather, lining, padding

Introduction

Unlike other categories of objects, weapons designed for protection have not been extensively covered by written sources. Our knowledge of these defensive weapons comes primarily from iconographic and archaeological documentation. However, information on the organic components of these armour pieces is incomplete, often based on unproven assertions,[1] while updated proposals or syntheses with precise data are rare.

If we consider the state of the art with regard to our knowledge of ancient armour – see, for example, the repertoire of breastplates[2] – most studies have either focused on typological, metal-technological and iconographic aspects or, sometimes, on the scarce written references – among them, the famous breastplate belonging to a former king of Egypt called Amasis, described by Herodotus[3] and Pliny;[4] or perhaps Pausanias' description of Polygnotus' paintings of the Iliupersis and the Nekyia in the *Leschē* of the Cnidians at Delphi,[5] alongside some other cases taken from other sources.

Research has rarely focused on how these armour parts were assembled and used, on their ergonomics or on other aspects that were fundamental to their wearers. In this situation, it is risky to summarise an overview of their organic parts. However, over the course of the following pages I will try to give just such an overview, concentrating on only a few categories: cuirasses,[6] protective items for the neck and helmets,

[1] I will mainly quote from the German scholarly tradition, not as criticism, but because they represent the group that has traditionally been most and best interested in the study of ancient weaponry. In this regard, A. Hagemann (1919: 52) proposed: 'Im Inneren wurde die Polsterung angebracht. War es Lininen oder weiche Filzmasse, also leicht schmiegsames Material, so fügte es sich von selbst in die Form. Bei Filz könnte man auch darán denken, dass es gesondert über einem entsprechenden Holzkern, genau mit dem Schaleninneren übereinstimmendm gearbeitet, d.h. gepresst wurde, um dan mit den Schalen vereinigt zu werden. Bei Leder sind beide Wege möglich.' In a similar vein, H. Pflug (1988b: 104-105) pointed out: 'Im allgemeinen geht man davon aus, dass es sich dabei um ein Innenfutter aus Leder oder festem Gewebe handelte [...] Mit Sicherheit stehen aber die feinen, an der Helminnenseite umgeschlagenen Stifte mit der Futterbefestigung in Zusammenhang.'

[2] The *linothōrax* type of organic armour was not specifically studied until the work of E. Jarva published in 1995 and the publication of a book by G. Aldrete and his team (Aldrete *et al.* 2013). Scale armour was studied by F. De Backer over the course of the last decade (2012; 2013). Over the past fifteen years, I have studied the Archaic, Classical and Hellenistic Greek, Italic and Iberian bronze and iron cuirasses and their related appliqués. (Graells i Fabregat 2012a; 2012b; 2016; 2018a; 2018b; 2019a; 2020a; 2020b; 2020c; 2020d; in press a; in press b).

[3] Hdt 3.47: '... what makes it worthy of wonder is that each thread of the breastplate, fine as each is, is made up of three hundred and sixty strands, each plainly seen.'

[4] Plin. *HN* 19.2: '... there is preserved in the Temple of Minerva, at Lindus, in the Isle of Rhodes, the cuirass of a former king of Egypt, Amasis by name, each thread employed in the texture of which is composed of three hundred and sixty-five other threads. Mucianus, who was three times consul, informs us that he saw this curiosity very recently, though there was but little then remaining of it, in consequence of the injury it had experienced at the hands of various persons who had tried to verify the fact.'

[5] Robert 1892.

[6] By the term 'cuirass' I mean both metallic and organic protections

Figure 1: Central episode of Doloneia painted on the red-figure calyx-crater attributed to the Dolon Painter in the British Museum (inv. no. 1846,0925.3) (drawing: Jose Quesada).

while trying to primarily draw upon archaeological and iconographic data from the central Mediterranean and its communication with the Black Sea during the period from the 7th to the 3rd centuries BC. Arm and leg guards will only be considered in exceptional cases, even if there is little evidence of textile remains;[7] this is due to the technical details required to affix organic lining.

This is, in effect, an approach to the physical embodiment of a concern for the correct use of armour and for the comfort of the wearer – in other words, to the materiality of ergonomics, which, as we shall see, varied according to cultural area and time, for sometimes unfortunately unknown reasons.

From skins to linings

According to written sources, the first garments used for combat were made from animal skins (Figure 1), with the *leontē* of Herakles and the *pardalis* used by the Giants among some notable examples thereof.[8] However, these skins were simple body coverings that did not require any special elaboration.[9]

The issue of head protection is different. Extant sources mention the *kynē*[10], which was made of water dog-skin (hence its name), and the *alōpekis*, a well-known Thracian helmet made of fox-skin.[11] In addition to Brinkmann's reconstruction for the Riace Warrior B,[12] there are only a few iconographic representations of the *alōpekis* on Greek vases.

for the chest. The Oxford Dictionary definition excludes scale armour, considering the English meaning of 'cuirass' to be restrictive ('a piece of armour consisting of breastplate and backplate fastened together'). However, the common use of Italian 'corazza', Spanish 'coraza', French 'cuirasse' or German 'Panzer' allows the different types mentioned above to be recognised under the term 'cuirass'.

[7] There is no evidence of any textile remains attached to the metal of armguards. However, information is available on leg protection in relation to the greaves of the Golyamata Mogila (Agre 2011), as well as in Vodoslavka Kurgan 6 (Gleba, in this volume).

[8] See, for example, the red figure *stamnos* attributed to the Tyszkiewicz Painter found in Vulci and stored in the British Museum (inv. no. 1849,0620.6).

[9] On the argument, see Graells i Fabregat and Menichetti 2024.

[10] On the argument, see Castrizio 2007, with previous bibliography.

[11] On the argument, see Graells i Fabregat 2018b.

[12] On the argument, see Brinkmann and Koch-Brinkmann 2016.

It is here that I would like to draw attention to what can be documented archaeologically, and what is instrumental for the use of helmets. This implies searching for evidence of the relationship between the metal and organic parts of any given helmet or, should these be impossible to find, suggesting the independent use of an organic lining. The reader will understand that it is not necessary to physically wear such helmets to recognise the need to cushion the hard shell against the wearer's head.

Unfortunately, we do not have any examples of such internal skins or headgear, and we have scarce written references to this type of armour, since ancient sources barely mention the fact that defensive weapons were made of metal. A question could be raised regarding whether such objects were solely metallic or if they had an inner lining, made of either fabric, leather, or a padding system fashioned from vegetable fibres. We may also wonder whether this could be archaeologically observed when there are no fossilised remains in the corrosion of the objects. As we will see, what is required for such a task is a thorough examination of their morphology and manufacturing techniques.

Further on, we will discuss the deployment of leather and linen with regard to body armour. However, in Europe, there is no direct physical evidence of either leather or linen armour[13] that is detailed enough to render the same observations we will propose below for metallic defensive weapons. In this regard, the documentation painted on vases presents a particular challenge, while there is, fortunately, more reliable information available on ancient sculptures, in addition to a few exceptional fragmented testimonies that we will discuss below.

Despite this, what we do know is that there is a significant amount of tissue debris and organic elements attached to the insides of various elements of the warrior panoply. Being able to characterise them, as well as knowing the different methods and systems by which they were affixed, allows us to better understand fundamental aspects of ancient armour. As we will see, the organic components (leather or textiles) enabled three different and essential purposes to ensure the proper functionality of the armour:

- first, ensuring the wearer's comfort and proper adjustment of the protective elements;
- second, protecting the edges of the metal components in order to prevent cuts and chafing, thereby securing their proper use by the wearer;
- third, reinforcing the effectiveness of the defensive weapons.

It should be noted that the Attic iconographic record shows a shift towards organic armour from the beginning of the 5th century BC,[14] when most of the armour documented in the iconography was still metallic. Nevertheless, archaeological studies have not shown interest in understanding non-metal panoplies. Similarly, studies carried out on vase iconography have not been interested in the antiquarian analysis of the armour they display, with the situation even worse when viewed from a historical approach (i.e., ancient history) which systematically examines a selection of cases and extrapolates its results from the 7th to the 5th century BC.[15] This is surprising, because metallic panoply was at the heart of the discourse on the rise of hoplites, as well as many other technical and artistic developments.[16]

Iconographic documentation from the 7th and 6th centuries BC only allows us to observe few details of the organic part of the armour[17]. On the other hand, the artistic developments introduced with the Severe Style (490–450 BC) enabled artists to work with greater precision and realism. Two notable examples of this change are the Riace Warrior A, who displays an adapted form of coiffure and inner lining, as seen on many portraits with a Corinthian helmet pushed up and resting on the back of the head (the so-called *Strategoshelm*), and the fragments of a spectacular red-figure calyx-*kratēr*, housed in the Michael C. Carlos Museum (Emory University, Atlanta) and attributed to the Achilles Painter, which shows a panoply painted in an unusual foreshortening. The helmet has the lining attached to the inner part, as do the greaves painted on the same fragment (inv. no. 2002.043.081) (Figure 2). On another fragment of the same krater (inv. no. 2002.043.056) (Figure 3), the linen armour is depicted from the front. It is open and empty, revealing the dorsal part from within and allowing us to observe the absence of stitching in between the different parts of the armour. This visual document is essential to understand imprecise iconographic sources and even the metal *linothōrakes* that were to be made in several assembled pieces. Regarding this crater, of note is the increasing number of depictions showing the process of equipping oneself with armour. These allow the viewer to see the different layers that make up the armour, as well as the order in which the warriors donned them.

[13] The fragments studied by M. Gleba (2012; see also Gleba 2015) are extremely important for understanding the details of its manufacture, but do not allow for a functional study of the armour as such.

[14] Graells i Fabregat 2021.

[15] Discussion and previous bibliography in Graells i Fabregat 2021.

[16] A synthesis in Kagan and Viggiano 2013.

[17] On Attic vase paintings, see Muth 2008. With regard to sculpture, exceptions of sufficient quality to entertain discussion about their organic parts, such as the Stele of Aristion (Athens, NM inv. no. 29) or many bronze hoplite figures (for a catalogue that is up to date, see Graells i Fabregat, in press a), date from the latter half of the 6th century BC.

Figure 2: Fragment of a red-figure calyx-*kratēr*, *c.* 450 BC, attributed to the Achilles Painter in the Michael C. Carlos Museum, Emory University, Atlanta (inv. no. 2002.043.081) depicting a helmet and a pair of greaves (photograph: © Bruce M. White, 2005).

Figure 3: Fragment of a red-figure calyx-*kratēr*, *c.* 450 BC, attributed to the Achilles Painter in the Michael C. Carlos Museum, Emory University, Atlanta (inv. no. 2002.043.056) depicting a linen cuirass (photograph: © Bruce M. White, 2005).

Although many extant representations of warriors arming themselves usually depict the naked male in the act of putting on a greave, other representations show the warrior in the act of fastening a *linothōrax* shoulder flap, exposing part of the soft protection that covered the body and protected it from excessive friction with the harder armour. Some examples of this can be seen in the Vienna Cup (Kunsthistorisches Museum inv. no. 3694) attributed to Douris and Python, or the cup in the Museo Gregoriano Etrusco from Vatican (inv. no. 16583) attributed to Brygos, both featuring a group of warriors arming themselves.

This concern for detail does not imply that the artists (sculptors, painters and *Waffenmeister*) experimented with creative mannerism, but something much more important: that they were accurately depicting something they knew, something that would have been familiar to many of their potential customers.[18] Greek depictions of war with panoplies function as a witness to the evolution, development, and changes needed to face conflicts and wars.

Archaeologically, textiles have been found on a few exceptional artefacts dating from the 4th century BC. These objects were fashioned with a metal surface and an organic coating on the inner part, in the form of either cloth or basketry, which were designed to improve ergonomic aspects such as comfort, lightness, breathability and effectiveness. It is important to note that they were made for war, and, as such, one of their main functions was to resist or repel blows. Another equally important function was to highlight the wearer's status and rank by way of elements such as colour choices and craftsmanship.[19]

Helmets and cuirasses are the two key elements that most relevantly define ancient armours. Both provided a symbolic and factual value, and have been widely considered in multiple studies. However, we must consider that whereas helmets were pieces of the panoply available to many warriors, the metal cuirasses were the privilege of a very exclusive, restrictive and significantly wealthier group. The non-active protection of the body (as opposed to the active protection, coming in the form of shields) was dominated by cuirasses, but also mandated other accessories. The most frequently used of these were the greaves,[20] which protected the shins and the knees. Less frequent were the protectors

[18] To evaluate the impact of war on Greek communities during the 5th century BC, see Raaflaub 2014; Arrington 2024. On the violence caused by war in Archaic and Classical Greece, see Graells i Fabregat in press c, with previous bibliography.

[19] On this topic, see Graells i Fabregat 2018a; Graells i Fabregat and Menichetti 2024, with previous bibliography.

[20] Kunze 1991; Jarva 1995: 84-100; Scarci 2019.

for the ankles,[21] feet ('Fußpanzer')[22] and thighs.[23] The lower abdomen and the genitals were protected by a *mitra*,[24] while the protection of the right upper limb was secured through armguards[25] (for either or both of the arm[26] and forearm[27]).

This general overview highlights the fact that the available preserved documentation regarding ancient armours is unfortunately scarce. However, in the following section, we will examine the main categories of defensive armaments that are physically known to us through archaeological evidence—namely cuirasses, armguards, neckguards and helmets.

Metallic cuirasses and related items

Bell cuirasses of the 8th-6th centuries BC, with separate padded robe or cloth

To maintain a diachronic order, it is useful to begin with metal cuirasses, commonly known as bell cuirasses.

Although extensively documented in the iconography of Greek vases, these are, paradoxically, an extremely rare category in the archaeological record. At present, we only have around 45 examples of this type of armour (Figure 4), mostly preserved in sanctuary contexts such as that at Olympia, which has the most preserved examples,[28] or Afrati in Crete, which has the second most. The funerary contexts associated with this type of armour are limited to Argos[29] and Metapontum.[30] However, despite their rarity, they allow us to establish the extent of the use of this type of armour between the final quarter of the 8th century BC and the late 6th to early 5th century BC.

The most interesting thing about these breastplates is the thickness of the metal itself, of less than 1 mm, making them very light and, therefore, too fragile to be effective in combat. Additionally, the side edges have varying shapes, depending on whether they belong to the part that closes the side or the openings for the arms:

- The former has an unprotected edge that could potentially harm the wearer;
- The openings for the arms were designed to prevent rubbing by rolling the sheet outwards.

Without going into many other details of the bell cuirass, it is also worth noting that the lower part of the cuirass is not straight. Instead, its shape is outward bent, ending in a rolled portion of the metal sheet towards the outside. These specifically Archaic Greek features were replicated by Thracian cuirasses, which are divided into two main types according to the shape of their edges – either unprotected, or covered with iron stripes (Figure 5a-b).[31]

Owing to the lack of perforations around their perimeters, it is unclear how exactly Greek and Thracian cuirasses were affixed to inner cloth or lining. This possibly suggests a twofold solution: either the organic parts were glued together, or they were an independent element separated from the metallic support.

This structural feature is well-documented in Greek art and is represented by the use of a padded robe or cloth, separate from the breastplate, as seen in the Douris-Python or Brygos cups (see above).[32] It is pointless to speculate whether they were made of wool, of a coarse material, or even of textiles of any kind, since their representations vary and are randomly combined among the different types of armour. Nevertheless, a comprehensive analysis of these representations is yet to be conducted and it is evident that the Greek approach of using a metal plate distinct from the organic component persisted until the late 5th century BC in both Greece and the southern Black Sea region, as evidenced by the Thracian series. This contrasts with the situation experienced in the Italic area, where even the earliest available evidence showcases armour that integrates its metal and organic parts.

Armguards of the 6th-5th centuries BC (the gradual addition of inner lining)

Although the earliest metal protective armour documented in Italy does not consist of breastplates but of armour for the limbs (arms and legs), the study of their production is particularly interesting because it gradually deviates from the parallels documented in Greece. Among the different types of limb protection, that of the arms perhaps best exemplifies this

[21] Jarva 1995: 100-105.
[22] Kunze 1967: 208-212; Jarva 1995: 105-106; Graells i Fabregat 2019b.
[23] Jarva 1995: 79-84.
[24] Jarva 1995: 51-60.
[25] Graells i Fabregat 2019b: 275-285, with previous bibliography.
[26] Greek: *peribrachionia*; English: 'upper arm-guard' or 'rerebrace' (Beazley 1947: 9); German: 'Oberarmschiene'; Italian: 'spallaccio', 'coprispalle' or 'omerale'.
[27] Greek: *peripēchia*; English: 'lower arm-guard' or 'vambrace' (Beazley 1947: 9); German: 'Unterarmschiene'; Italian: 'protezione per l'avanbraccio' (Bottini 2013: 36).
[28] Graells i Fabregat in press a.
[29] Courbin 1957.
[30] Graells i Fabregat 2019b; 2020d.
[31] On Thracian cuirasses, see Ognenova-Marinova 2000; Graells i Fabregat 2020: 76-79; Ivanov 2022; Ivanov 2023; Zlateva *et al.* 2023: 2-4.
[32] Similar to the previously-mentioned cups, there are other examples that demonstrate the duality between the organic base and the rigid component, whether metallic or otherwise, that can be emphasised. The fragment of a belly amphora from Heidelberg (Ruprecht-Karls-Universität inv. no. S174) is particularly illustrative: it depicts a crouching warrior who puts on his greave while his body is covered in richly decorated clothing. This is clearly different from what should be a metal cuirass or *linothōrax*, and we must regard it as an organic base independent of the armour itself.

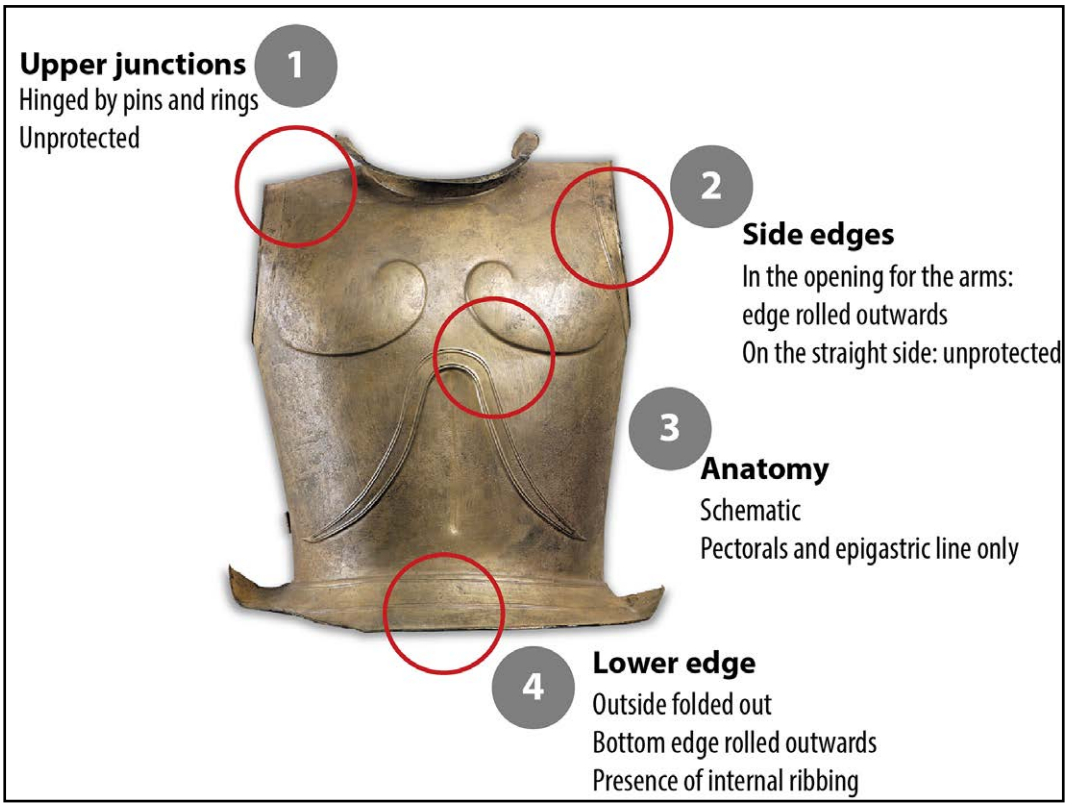

Figure 4: Scheme of the main morphological and technological details of Archaic Greek bell cuirasses (drawing: Raimon Graells i Fabregat).

distinction between Italian and Greek production. Protection for the arms refers to metal objects that wrap around the arm and forearm separately. It is possible that this type of protection had an organic origin, which was easy to obtain and offered a certain degree of efficiency.[33] Armguards feature various internal protection systems that are directly correlated to their decoration, including motifs and techniques. Each type is different in the protection of the perimeter and establishes the models that would be consolidated in the other productions of defensive armaments in Italy.

All documented cases have been fashioned from a bronze plate. The first upper armguard plates, if they were to be open and unfolded, correspond to straight-sided semi-ellipses, with the upper part cut in a rounded shape, symmetrical to a shaft in the centre that varies in size and is orientated with the rounded part toward the shoulder and the straight towards the elbow. Gradually, without abandoning this symmetry, the lower part of the plate corresponding to the upper armguards was cut in a more complex manner: not straighter, but finished in acute appendices for additional protection of the elbow.

At first, the ergonomics rendered the appendices symmetrical; however, the intention of adapting the plate curves to the deltoid, biceps, triceps and to the inner brachial muscle quickly made the appendices asymmetric, both in their shape and with regard to respecting the plate's longitudinal shaft. Greater care for better adaptation is observed through the addition of folds and metal modifications to define the muscles.

The ends of these pieces, which (potentially) came into contact with the wearer's arm, were folded or rolled outwards. In order to protect the wearer, the straight sides were rolled outwards with a nerve in the interior, which granted stiffness and allowed the plate to be wrapped around the arm and only protrude slightly over the shoulder. As we have mentioned above, the cut in the lower part gradually changed, leaving the aforementioned appendices to give additional protection to the elbows. These appendices were not outwardly rolled, and therefore had a fold towards the exterior where they would affect the internal part of the articulation between the arm and forearm.

Simultaneously, the part covering the shoulders was exaggerated and converted into a type of platform on which to depict complex decorative motifs, ever more so as ergonomics improved until a peak was reached.

[33] On this point, see De Backer 2013.

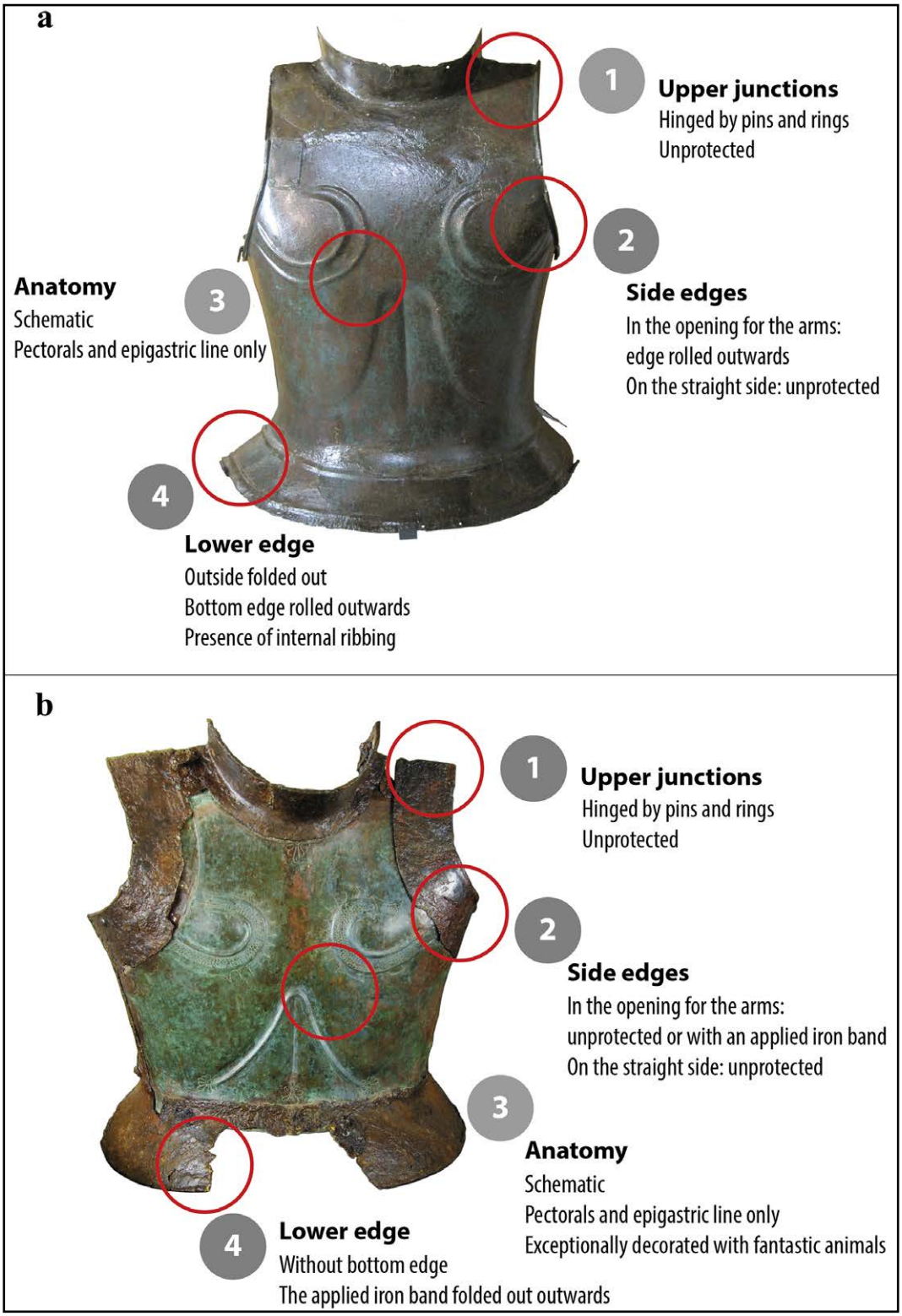

Figure 5: Scheme of the main morphological and technological details of Thracian bell-archaic cuirasses: (a) type A and (b) type B (drawing: Raimon Graells i Fabregat).

From there, we notice regression, ultimately related to the general dynamics associated with the production of arms and armaments that included these protective elements.

There are two distinguishable morphological groups, with some capacity for variation, that relate to the consecutive stages of evolution outlined above:

- **Type A:** Guards obtained from a bronze plate, in a semi-elliptical form with a straight bottom part. These present a sequence of perimeter holes situated on the outer rim, which have been previously pierced as a crown perimeter, except for the base. The holes can be related to organic protection provided in the internal part, which was also useful to protect the sharp metal edges. This type of guard does not cover the elbow. There is a certain concern for the ergonomics of the arm muscle, from the concavity of the upper part of the piece, which is designed to accommodate the shoulder (the deltoid), as well as the bottom part, for the biceps. The pieces in this group do not have any surface decoration.
- **Type B:** Guards obtained from a plate with a slight bend in the central part of the sides, with the base in the shape of an inverted 'U' with two appendices (symmetrically at first, then successively arranged asymmetrically while respecting the plate's central shaft). The articulated form of this second type allows for greater coverage of the arm, fully including the shoulder and elbow. As in the previous case, the perimeter is covered by a flat crown where the holes are situated; however, unlike type A, this one covers the entire perimeter. Only the central part, at the bottom, exhibits a slight distancing of the holes, in order to facilitate an internal protection system intended to prevent contact between metal and flesh. The side protections do not exhibit the rolling of the plate, instead giving way to an outward-facing fold at a closed angle. The central section of the piece's sides showcases a number of bends that distinguish the deltoid muscle from the arm muscle. This distinction is enhanced and made more noticeable by a slight bend of the plate, which, at the same time, enables the piece to adapt to the contour of the arm by marking the outlines of the principal arm muscles (biceps and triceps). Finally, there is also a noted concern with adapting the piece to the ergonomics of the arm, as shown by the plate's curvature and concavity, accentuating this with the aforementioned anatomic muscular details and increasing the curved surface at the top instead of rolling it over the shoulder, thereby ensuring broader joint mobility.

Both types of upper armguard are the result of an evolutionary process determined by an interest in ergonomic comfort that did not restrict joint movement. Type A would precede type B, which showcases greater interpretative complications due to its figurative decoration.[34]

On the other hand, changes in morphology regarding the forearm protection appear less obvious, from being crafted from a rolled trapezoidal plate without elbow covering (type A) to another with appendices placed in the upper part to protect the elbow (type B). The decoration of this group is not documented, beyond the definition of certain muscles. Unfortunately, the less-documented catalogue, especially compared to that of the upper armguards, does not allow for any major observations.

Aside from Olympia, examples were also found in Magna Graecia (between Kaulonia and Ruvo di Puglia, including Gioia del Colle, Poseidonia-Paestum and Chiaromonte), approaching the area where greaves, *prometōpidia* (protection for the horse's head) and *prosternidia* (protection for the horse's chest)[35] were located, with similar decorations obtained using metal embossment and, occasionally, with inlays of pieces in ivory or bone. All of this gives way to a likely focus of production that was more concerned with spectacular and Baroque elements from the late Archaic panoply. In fact, this important affirmation leads us to observe the distinct stylistic differences between productions of Continental Greece and those of Magna Graecia regarding common types of armaments that, from the end of the 6th century BC onwards, took vastly different and diverging directions. Indeed, in comparison, defensive weapons from southern Italy and from the Peloponnese have always presented a significant typological and associative distance, even though evidence has been provided from both territories of similar types of helmets, greaves and shields – but, notably, not cuirasses. Although the armguards correspond to a Greek model, equine decoration elements seem to be absent from the Greek repertoire itself, which highlights an issue of interpretation as both the armguards and equine decoration elements have identical techniques as well as some decorative motifs. At this point, we may ask whether these elements were crafted in colonial or indigenous workshops. If the answer was colonial, why did they then incorporate new elements to be exhibited exclusively by Italic princes? If the answer was indigenous, were these workshops then also responsible for the production of armguards? And how did they know to make them evolve in parallel to the Greek dynamic evolution?

[34] On this topic, see Graells i Fabregat 2020b.
[35] On this topic, see Graells i Fabregat 2019b.

Considering that the production of South Italic greaves modified the anatomical diagram of the Greek style by incorporating rich figurative decoration through the technique of embossment,[36] it is possible that the creation of arm protection corresponded to a similar reality. It is undeniable that they took as their model elements from the defensive panoply of the Greek motherland, which also proved to be successful in southern Italy. Importantly, it is possible that their original production in Magna Graecia was rapidly influenced by the tastes and interests of Italic productions, which allows us to see the change occurring from productions of the Greek tradition, with straight rims rolled out and plain surfaces, to Italic productions with outward folds and ergonomic adaptations of the rims with complexly decorated surfaces either by embossing or through inlays. These characteristics allow for the definition of a continuous diachronic sequence that accumulates morphological improvements and technical changes in its production. Distribution and contextual information are sufficient to establish a diagram that allows us to date the production of armguards[37] throughout the 6th century BC and observe how its short life is directly related to a way of equipping the warrior in accordance with the Italic model.

Italic cuirasses of the 5th-4th centuries BC (systematically with internal lining)

The earliest documented Italian bronze cuirass is an exceptional creation that deviates from the bell-shaped model that existed from the Bronze Age until the Archaic period. The prominent musculature, exaggerated in both intensity and in the number of muscles represented, is also a far cry from the earliest representations of anatomical armour on Greek pottery. However, it is nevertheless possible to understand this combination of mistakes and exaggerated details.

This cuirass was found in an impressive, isolated tomb in southern Latium at Lanuvium (Figure 6).[38] The tomb has been dated to the first third of the 5th century BC, but this estimate may need to be slightly adjusted to the mid-5th century BC, for the following reasons:

- If we examine the anatomy, the earliest representations of realistic anatomical breastplates date back to the second quarter of the 5th century BC.[39]
- The soldering of nipples was not present on any Greek or Italic piece from the 5th century BC, but became a trend in Etruscan fashion by the end of the 4th century BC.[40]
- The system used for joining the plates shows that this cuirass was the first to use hinged band plates, which were unknown in the Greek world and were to become structural elements in Italic production.[41]
- The perforation of the perimeter, which is unknown in Greek examples but is particularly frequent in Italic productions, as we demonstrated above in the case of armguards (see above) and of trilobate cuirasses, which, although not being enveloping armour, are nevertheless structured as integral sets.[42]

Trilobate cuirasses (Figure 7) combine elements of both disc cuirasses and the Lanuvian cuirass. The lightness and simple structure are taken both from the disc cuirass, and from the Lanuvian cuirass. The joining plates and the peripheral perforation of the edge are also of interest, as they lack a system for protecting the wearer incorporated in their morphology. Instead, these perforations were used for sewing in a lining or another form of organic protection.

After reviewing the previous types of armour, it is difficult to determine whether perimeter perforations were intended for attaching a guard to cover the edge, or for attaching an internal lining to the armour (to either cushion or reinforce the cuirass).

The study of the bronze collection at the Archaeological Museum of Madrid enables a closer examination of this matter. Two plates (inv. nos. 10320 + 10327 and 10322-10324 + 10326) reveal that the external, convex surface is clean and shiny, while the inner side retains the original corrosion and traces of organic material (Figure 8a-b). These plates were not restored, allowing for detailed compositional analysis.

The preserved fragments had remains of textile on their inner side, suggesting intentional application rather than accidental preservation. Although the density varied slightly in some fragments, it was nevertheless clear enough to study and determine its nature. Álvarez and Doménech's analysis concluded that the documented remains on the armour in the Archaeological Museum of Madrid are made of hemp.[43] It is important to contrast this observation with the analysis of other samples that we hope to soon be able to carry out on this type of armour from the area of Paestum.

[36] Synthesis available in Scarci 2019.
[37] Bottini and Graells i Fabregat 2019: fig. 2.
[38] Zevi 1993; Frapiccini 2003; Colonna 2015-2016.
[39] Graells i Fabregat 2018c; Bottini and Graells i Fabregat 2019.
[40] Graells i Fabregat 2018c.
[41] Graells i Fabregat 2012a; 2018c.
[42] On such cuirasses, see Tagliamonte 2019, with previous bibliography.
[43] I am very grateful to Dr Carla Álvarez of the University of Granada and Professor María Teresa Doménech of the Universitat Politècnica de València for their study of this organic material. For the methods used and results obtained, see Álvarez *et al.* forthcoming.

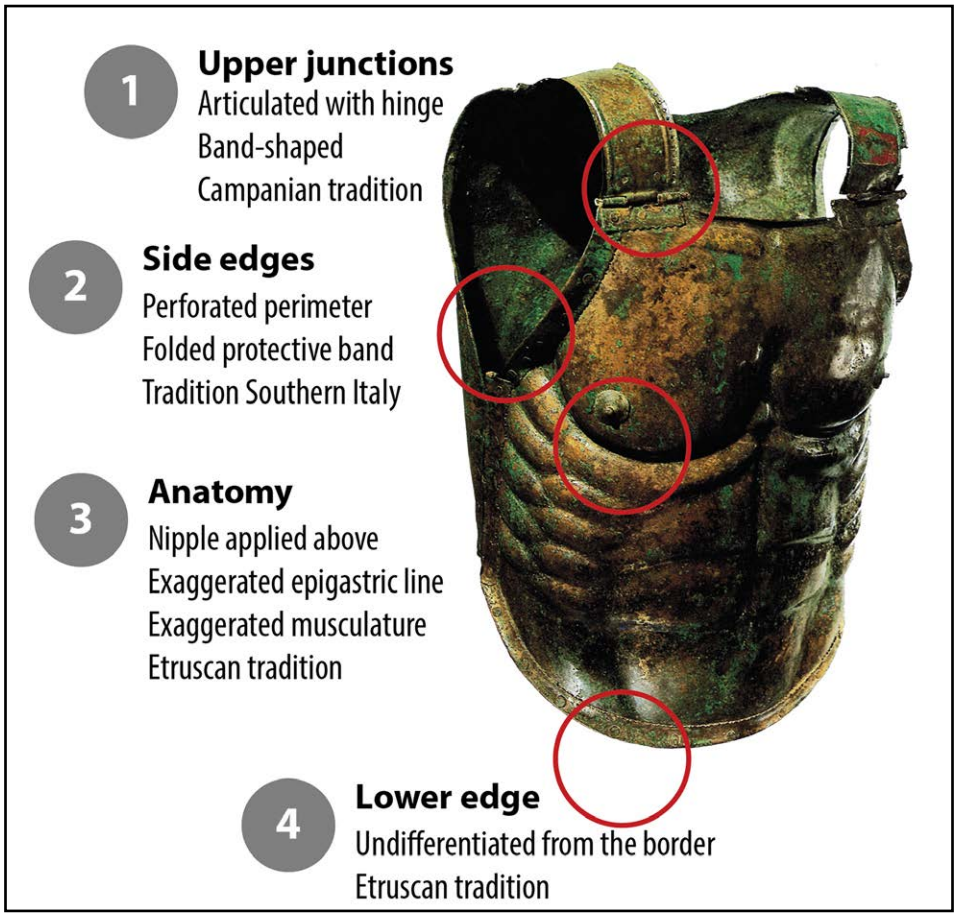

Figure 6: Scheme of the main morphological and technological details of the Lanuvio cuirass. (drawing: Raimon Graells i Fabregat).

Unfortunately, traces of organic materials on Italic armour are not common. This is mainly because they have undergone extensive restoration processes as they were traded and displayed. As it is well known, the majority of known defensive armour can be found on the international antiques market, instead of in public museums. This is best exemplified by the extensive A. Guttmann collection,[44] which was later partially acquired by the C. Levett collection,[45] with dozens of cuirasses and hundreds of helmets, most of which were looted in the second half of the 20th century.

Most of the known defensive weapons date from the 4th century BC. This was a period when the various communities that inhabited Italy developed a spectacular industry and engaged in the overproduction of armour, in which the culmination of Italic tendencies is most evident.

The Etruscan cuirasses (Figure 9)[46] dating back to the 4th century BC feature a muscular design, a lack of nipples, and perforations around the perimeter that allowed for an inner lining to be sewn to the cuirass.

South Italic anatomical cuirasses[47] from the second half of the 4th century BC exhibit distinct morphological details that suggest a shared trend with Etruscan armour, while also possessing a distinct identity, as can be seen from the (much more realistic) type of musculature depicted, the way nipples are applied, the specificities of hinge attachments as well as the system for affixing the inner lining, not by means of a perforated perimeter to which a cloth would be sewn, but instead by means of a pressure system in which the perimeter edge is bent inwards by pinching a liner (Figure 10) that was then secured by the pressure of the metal itself. This system was also believed to protect the wearer by reducing injuries through folding the edges of the arm openings inwards. In addition, the bending

[44] A comprehensive study of this collector and his exceptional collection is still pending. However, numerous publications provide details about it, particularly the introductions to H. Born's books (e.g., Born 1993; Born and Hansen 1994).
[45] A summary of this collection can be found in Burns 2011.
[46] Graells i Fabregat 2018c.
[47] Graells i Fabregat 2018c.

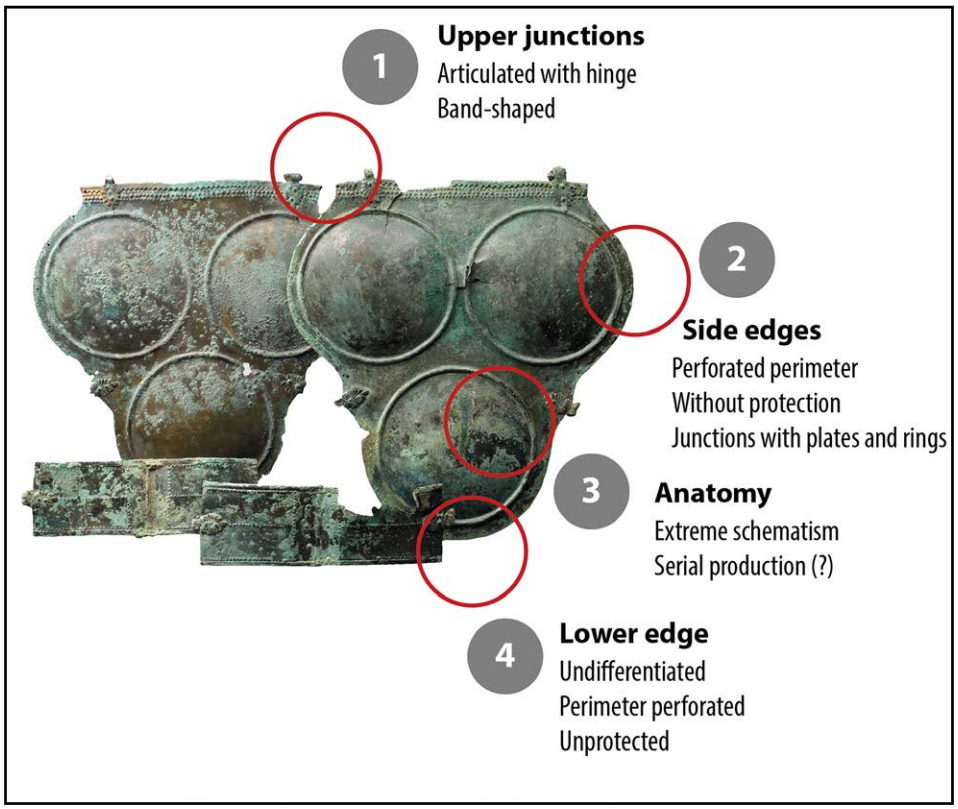

Figure 7: Scheme of the main morphological and technological details of trilobate Italian cuirasses (drawing: Raimon Graells i Fabregat).

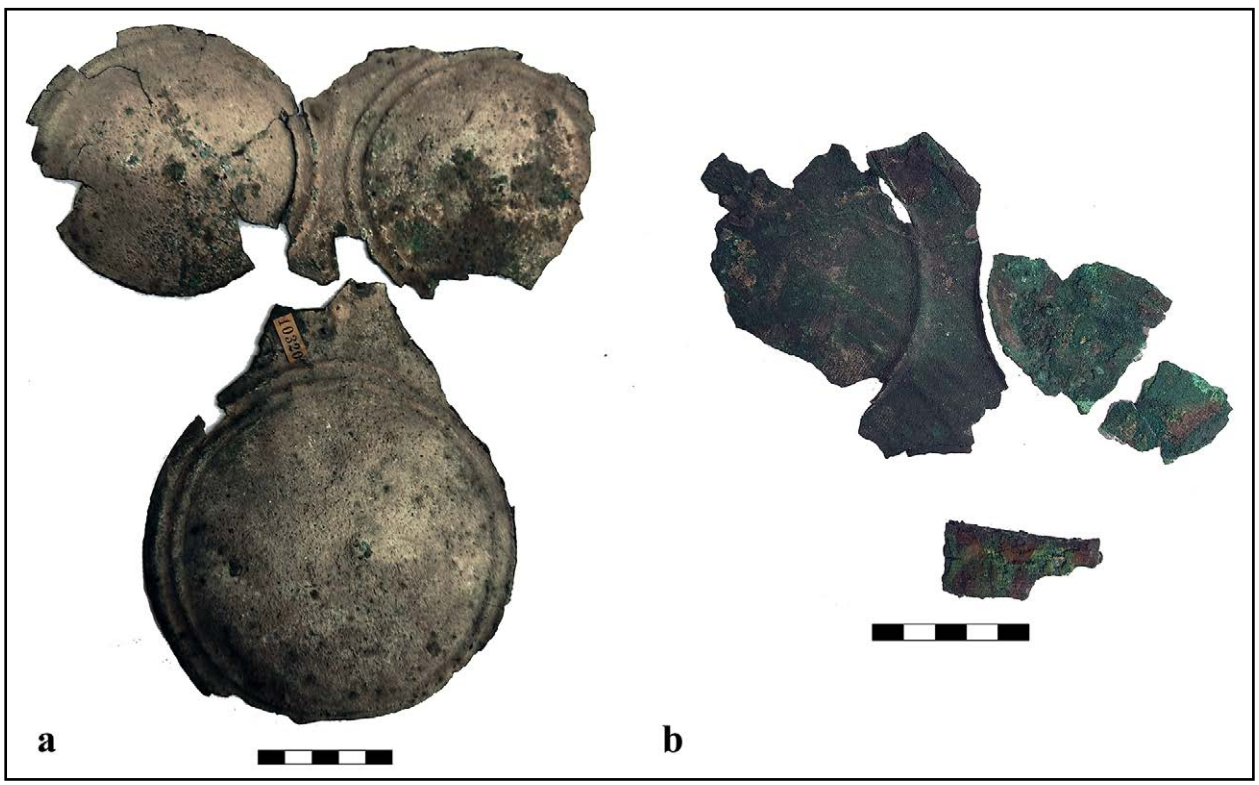

Figure 8: Two trilobate armour plates with remains of organic lining from the National Archaeological Museum of Madrid: (a) inv. nos. 10320 and 10327; (b) inv. nos. 10322-10324 and 10326 (photographs: Raimon Graells i Fabregat).

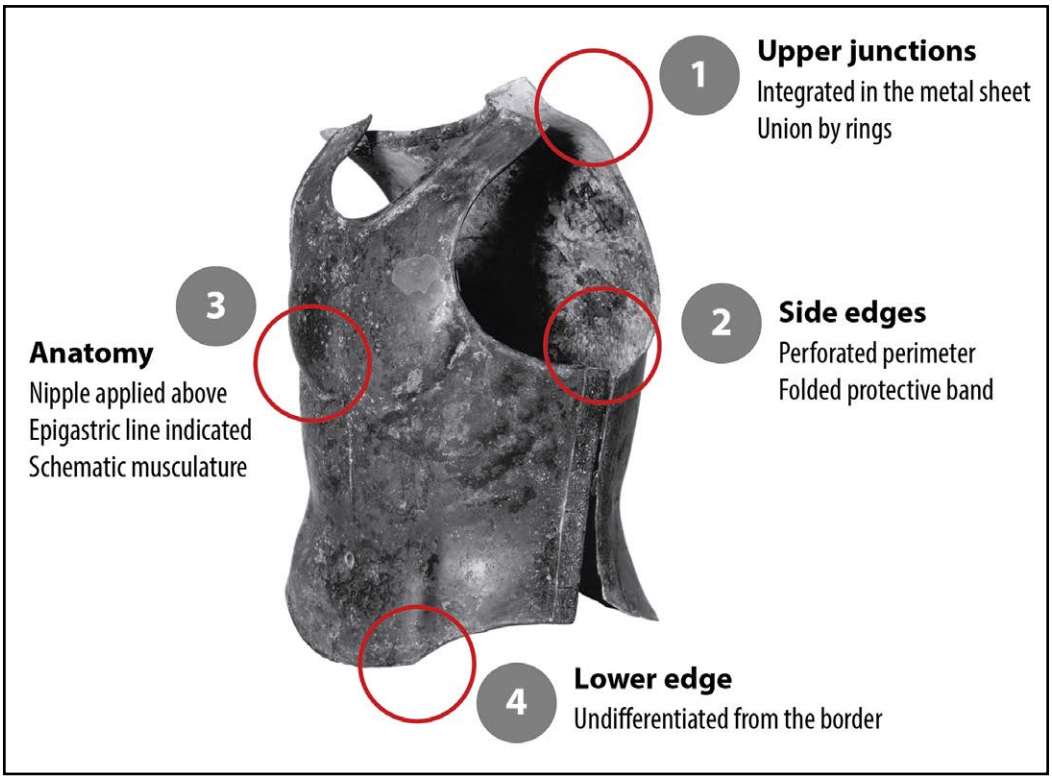

Figure 9: Scheme of the main morphological and technological details of anatomical Etruscan cuirasses (drawing: Raimon Graells i Fabregat).

of the metal was achieved by creating weak points on the surface by means of longitudinal cuts.

Aegean and Black Sea cuirasses and corselets of the 5th-3rd centuries BC: iron-dominated models

After observing how the Italic system preserved the association between metal and organic parts over time, at least until the transition between the 4th and 3rd centuries BC, it is worth exploring whether the same pattern can be found in the Greek region and towards the Black Sea – more specifically, whether the separation of the organic and metallic components is maintained over time.

For that purpose, I have chosen breastplates made either entirely of metal or with a high proportion thereof. The distribution of these pieces is quite extensive, from Castro in southern Italy to Crimea, and can be classified into two main types: the *linothōrax* converted into a metallic object,[48] and the anatomical breastplates.[49] Unlike the Italic anatomical breastplates, those found in this region are always made of iron; however, the structure systematically lacks organic material. Only the cuirass from Tomb II at Vergina appears to preserve slight traces of cloth or leather, as mentioned by Andronikos,[50] but this has not been confirmed by a specific study (Figure 11).

Various types of armour can be found in this region, including organic-based armours and metal-coated armours made of iron, bronze, gold or silver.

Organic-based armour and related items

Aegean and Black Sea scale armour of the 5th-3rd centuries BC

One notable type of defensive armament from the region is scale armour, which is believed to have been influenced by Eastern traditions and has traditionally been associated with Scythian influences in the southern Black Sea region, even though such armours did not appear in this region until the beginning of the 4th century BC.[51] This fact suggests a possible Persian influence over its adoption.[52]

The tomb of a young Thracian warrior unearthed between Zlatinitsa and Malomirovo[53] is one of the archaeological contexts that have documented this

[48] Graells i Fabregat 2020d; Iossif and Pappas 2023.
[49] Graells i Fabregat 2020 ; in press b.
[50] Andronikos 1984: fig. 33.
[51] De Backer 2012; De Backer 2013.
[52] Graells i Fabregat 2020a.
[53] Agre 2011; Stoyanov 2015: fig. 1.

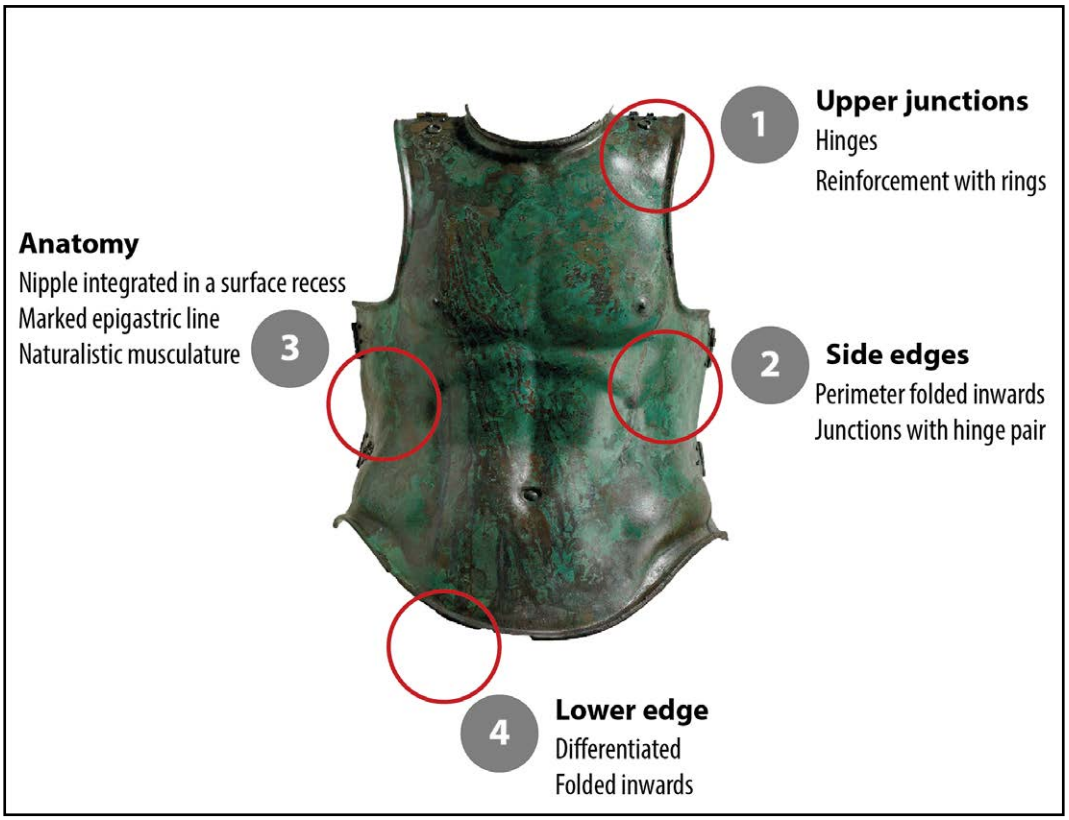

Figure 10: Scheme of the main morphological and technological details of anatomical South Italic cuirasses (drawing: Raimon Graells i Fabregat).

Figure 11: Iron *linothōrax* from Tomb II at Vergina (photograph: Andronikos 1984: fig. 33).

Figure 12: Scale armour from Zlatinitsa-Malomirovo burial mound (photograph: Stoyanov 2015: fig. 1).

type of armour in the region (Figure 12). The contents of the grave goods include textile remains made of both plant and animal fibres, sometimes in the same textile material (as indicated by B. Dimova).[54] The scale cuirass unearthed at the tomb is remarkable for its complex composition, as well as for its unusually well-preserved condition. Its discoverer has determined that it is composed of small iron plates sewn together onto a piece of leather to form a structure resembling fish scales.[55] In addition, the excellent state of its preservation allows a clear view of the cuirass's complete shape, including the precise design for equestrian riding – featuring side tongues[56] that are longer than those found frontally and dorsally, as well as shoulder straps of unequal length (Figure 13), with the shorter right flap enabling optimal use of the bow. This detailed analysis is valuable because it contrasts with other types of armour, such as the symmetrical metal scales from Assyria[57] or the metal and leather scales from Scythia or Far Eastern Asia from Yanghai,[58] as well as those from the Metropolitan Museum.[59]

In addition to the scale armour, a neck protector known as a 'gorget' or *peritrachelion* was also found in the same grave,[60] although its particular morphology warrants further discussion in greater detail.

Gorgets

The gorget is an element that cannot be evaluated independently. It is designed to complete the protection of the neck and the upper and central part of the chest,[61] the most unprotected parts of the *linothōrakes*. The presence of gorgets leads to the identification of other remains with which they are associated as evidence of organic armour.

The gorget from Zlatinitsa-Malomirovo is made of a leather structure with small metal plates sewn together in the shape of fish scales.[62] It is important to note that the scales are smaller in size than those on the breastplate.

The gorget found in Taphos A at Derveni[63] was not associated with metal armour. However, this does not necessarily mean that it was not associated with other types of armour that may not have left many remains, such as a *linothōrax*. Therefore, the conclusion the excavators reached, that this gorget was not associated with metal armour, is accurate. Indeed, by examining the conserved metal rings and small appliqués,[64] it is possible to recognise the metallic remains of a *linothōrax*.[65]

When discussing the relationship between the Thracian area and the Greek and Mediterranean world, it is necessary to mention the impressive burial mound at Golyama Kosmatka, a rich tomb attributed to King Seuthes III[66] located near Shipka, in the Kazanlak valley, Stara Zagora region. The attribution to Seuthes III is based on the fact that his name appears on several objects. The tomb's complexity and the richness of its contents require an extensive study. Among the outstanding grave goods that deserve attention are the defensive weapons, such as the helmet featuring

[54] Dimova 2014.
[55] Agre 2011.
[56] Agre 2011: ill. III-17.
[57] De Backer 2012; De Backer 2013.
[58] Wertmann *et al.* 2022.
[59] Linen or leather-based armour with metallic scales will not be discussed in this paper, as it falls beyond the scope of our focus on the Aegean and Black Sea regions and their Eastern surroundings.
[60] Agre 2011: ill. III-17.
[61] Faklaris 1985.
[62] Agre 2011.
[63] Rhomiopoulou 1978: cat. no. 228.
[64] Themelis and Touratsoglou 1997: pl. A30 and A70a-b.
[65] Graells i Fabregat 2020a.
[66] It was excavated and discovered intact in 2004 by G. Kitov, and later published by D. Dimitrova in 2015.

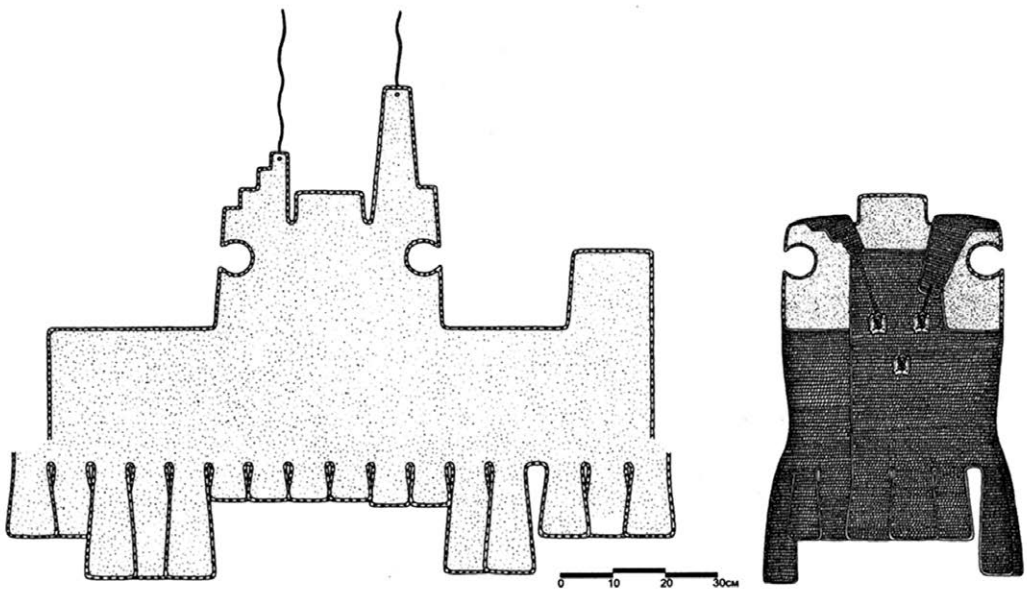

Figure 13: Scale armour from Zlatinitsa-Malomirovo burial mound (drawing: Agre 2011: ill. III-17).

a forehead inscription[67] and the impressive 'gorget' or *peritrachelion*,[68] which bears the most well-preserved textile from Golyama Kosmatka (Figure 14). This is an exquisitely fine weft-faced tapestry with floral motifs executed in gold thread overlaid on a balanced tabby and an iron base[69]. The edge is further decorated with pleats. The Mezek pectoral also had traces of weft-faced and a balanced tabby, but on the reverse side, as did the gorget of Vergina, while the back of the Pydna *peritrachelion* was covered with two sheets of leather. D. Dimitrova presents some data in her publication,[70] but further confirmation and extensive studies are required to verify these details on the gorget of the Golyama Kosmatka burial.

Figure 14: Gorget from Golyama Kosmatka burial mound (photograph: Dimitrova 2015: fig. 146).

Organic-based cuirasses

The tomb attributed to Seuthes III, similar to Taphos A at Derveni, does not contain a metal cuirass. However, unlike Derveni, a leather cuirass[71] was recovered in the lower corner of the tomb during the excavation, thanks to the better preservation conditions in the Bulgarian tomb (Figure 15).[72] D. Dimitrova reported the discovery of a piece of leather on the ground, surrounded by various metallic elements, gold- or silver-gilded (Figure 16)[73]. The leather piece from Shipka was extremely fragile and was, therefore, placed in a box for proper restoration. As it is a recent discovery, the piece has not been yet restored, and consequently does not have a catalogue number. Additionally, neither was it included in extant discussions regarding metallic elements and appliqués.

[67] Dimitrova 2015.
[68] Dimitrova 2015: 170, 214-215, fig. 146.
[69] Dimova 2014.
[70] Dimitrova 2015.
[71] There are few other examples of leather armour, most of which remain unpublished. One such example is a breastplate from Rutigliano, near Bari, which is currently being studied by Andrea Montanaro (to whom I am grateful for the information).
[72] Dimitrova 2015: 130, 214-215, fig. 103, 107 and 109.
[73] Dimitrova 2015.

Figure 15: Leather cuirass from Golyama Kosmatka burial mound (photograph: Dimitrova 2015: fig. 103).

As previously noted, Taphos A at Derveni likely features a *linothōrax* due to the presence of the gorget and appliqués. The case of the Shipka grave, however, provides even clearer evidence of a *linothōrax* due to its association with a gorget, with an even number of appliqués to tie organic elements, as well as a leather structure that closely resembles anatomical armour such as that of Prodromi.[74] In this case, the iron armour was found lying on the ground, with several of its gold fittings that were used to attach the straps having fallen off and found strewn around the iron piece. The find's photographic documentation is excellent, and allows for a clear observation of this fact.[75] This, in turn, is crucial to comprehend the reason for the pieces' separation, as the fittings on the armour were designed to withstand physical pressure during use. Similarly, the fittings on the Shipka armour are likely to have served the same purpose. The appliqués on the Vergina breastplate were initially affixed to the iron; however, due to oxidation, they became detached and fell a short distance away. It is possible that a similar situation befalling the leather armour found at Shipka was caused by the degradation of the leather itself.

The earliest metal decorations of organic breastplates date back to the mid-4th century BC. Particular care was taken on the ornamentation of the shoulder straps[76] that connect the front and rear parts of the

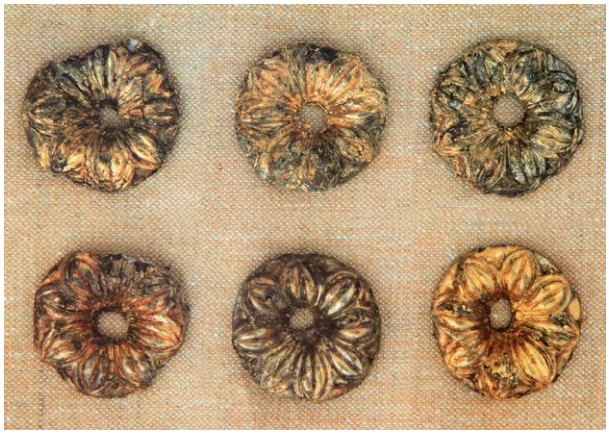

Figure 16: Golden appliqués for the leather cuirass from Golyama Kosmatka burial mound (photograph: Dimitrova 2015: fig. 211).

breastplate. These appliqués are elements derived from the *linothōrax* and from Greek (later Macedonian) and Eastern influences. Italic metal cuirasses eminently lack this type of shoulder strap.

However, the type of the used shoulder strap determines the nature of the binding loop, and can even indicate whether it was used for decorative purposes in the case of *linothōrax* or of anatomical cuirass models.[77] This conclusion was reached through iconographic analysis. The distribution map shows the location of

[74] Iossif and Pappas 2023; Graells i Fabregat in press b..
[75] Andronikos 1984.
[76] For a complete overview and catalogue, see Graells i Fabregat 2018a.
[77] Graells i Fabregat 2018a.

these decorative metal objects ranging from western Greece to southern Italy, highlighting the continuous interaction and exchange of ideas and models between cultures that drove change and improvement in a region of diverse cultures and craftsmanship traditions.[78]

In accordance with the practice of adorning organic-based breastplates with metallic elements, similar decorations can be found on the flaps of skirts (*pteruges*). These elements are present from the mid-4th century BC onwards, even though painted pottery or sculpture from the previous centuries depicts the same features painted in this position. Therefore, the decoration of these parts did not emerge *ex novo* at this time in its entirety, but only in what regards the application of metallic elements.[79]

The metal appliqués that covered the small cloth or leather strips affixing the upper part of the cuirass to the shoulders (*epōmides)* or perforated the skirt of the armour (*pteruges*) were made of fine bronze sheets and had themselves a perforated perimeter.[80] This was not intended to supplement the armour's defensive effectiveness, but rather to indicate the wearer's wealth and technical prowess. The use of armour made of organic materials became more common during the second half of the 4th century BC, which led to the development of this type of armour appliqués.

Helmets

We may also cite other types of organic elements on defensive weapons based on iconographic evidence. In this regard, helmets would take on a special prominence. Moreover, the interior of such artefacts contains archaeological remains that should be promptly considered to complete this survey.

It is important to note that, with a few exceptions, archaeological studies have not yet taken into consideration the relationship between the metal helmet and either its organic part or its design to improve ergonomics. Instead, the focus has thus far been on the typological, technological and military aspects that we have previously noted in the case of armours.

In accord with the widely-accepted assumption that helmets featured a leather lining, the only examples that we are aware of are the Zlatinitsa-Malomirovo helmet and the silver-plated iron helmet from Prodromi.

For the former, the excavator reported that it featured a leather inner lining decorated with purple.[81] The purple decoration indicates that the leather piece itself did not belong to the inner lining of the helmet; rather, the leather and metal parts were distinct and separate pieces. This assertion is supported by the fact that helmets emulated the decoration found on breastplates. However, upon closer inspection of the helmet, there are no apparent elements for attaching an inner lining, either by way of perimeter sewing or through elements attached to the calotte, as previously suggested by H. Pflug.[82] On the other hand, the Attic-type silver-plated iron helmet from Prodromi (Archaeological Museum of Igoumenitsa ΘΕ 6) contained remnants of a leather lining which have not been studied in detail but were reported in the most recent publication covering the helmet.[83]

Of note, a change occurred in the Italic area in the 6th century BC, with a series of examples that preserved both their internal lining and the elements for their affixion. A summary look allows us to observe a tradition that stands in opposition to that of the Zlatinitsa helmet. To evaluate the differences in craftsmanship in the area under study, it is important to take a diachronic approach that includes Greek examples. This outcome will be achieved by examining three distinct examples: the first, from an Archaic Greek wreck that was excavated in Mallorca (Figure 17);[84] the second, an object of the Picene type found in a private collection on the Adriatic coast of Italy (Figure 18a-b);[85] and the third, an unpublished helmet originating from clandestine excavations at Ordona, in the south of Italy (Figure 19a-b).[86]

[78] Graells i Fabregat 2020a.

[79] Graells i Fabregat 2018a; 2020c.

[80] The perforations around the perimeter suggest that the pieces were meant to be attached to an organic support by stitching. This eliminates the possibility that the plates were intended to decorate the metal armour, as the perforations would not serve any functional purpose in such a possible case.

[81] Agre 2011: ill. III-20.

[82] Pflug 1988b: 104-105: 'Die Nietstifte und der Gegenstand, zu dessen Befestigung sie dienten, sind fast durchweg verloren. Im allgemeinen geht man davon aus, dass es sich dabei um ein Innenfutter aus Leder oder festem Gewebe handelte. Hier ist zu bemerken, dass keine Funde vorliegen, die ein solches Innenfutter mit nach aussen umgeschlagenem Rand belegen. Auch lässt sich der mehrfach festellbare, scharf begrenzte Randstreifen, der sich beispielweise bei K12 deutlich abzeichnet, kaum auf ein verhältnismässig weiches, organisches Material zurückfüfhren...Mit Sicherheit stehen aber die feinen, an der Helminnenseite umgeschlagenen Stifte mit der Futterbefestigung in Zusammenhang. Sie kommen an korinthischen Helmen seit dem frühen 6. Jahrhundert v. Chr. Vor und sind im allgemeinen in einer dichtem Reihe sehr nahe am Helmrand angebracht. Solche Lederstifte finden sich bei einigen Helmen neben einer weiteren Reihe von grösseren Nietstiften mit Zierköpfen oder entlang einer Randauflage aus Bronzze. Dass die Helme nicht durchweg mit einem Innenfutter ausgestattet gewesen sein müssenm kehren die zahlreichen Beispiele ohne Nietrand; dazu zählen sämtliche Helme der Myros-Gruppe und die meisten Exemplare der späten Stufe. Das Kopfpolster, das unter der Kalotte der teilweise recht schweren Helme getragen wurde, ist nur selten Gegenstand der Vasenmalerei.'

[83] Pliakou 2023: 118, with previous Concerning the tomb, see Graells i Fabregat in press b.

[84] Alfaro 2008; Egg and Marzoli 2008.

[85] Born and Nebelsick 1991.

[86] Egg 1986; Pflug 1988a: 14-15, fig 5-6, with the indication that it comes from the plundering of a tomb in Ordona: 'Ordona aus einem Grab geraubt'.

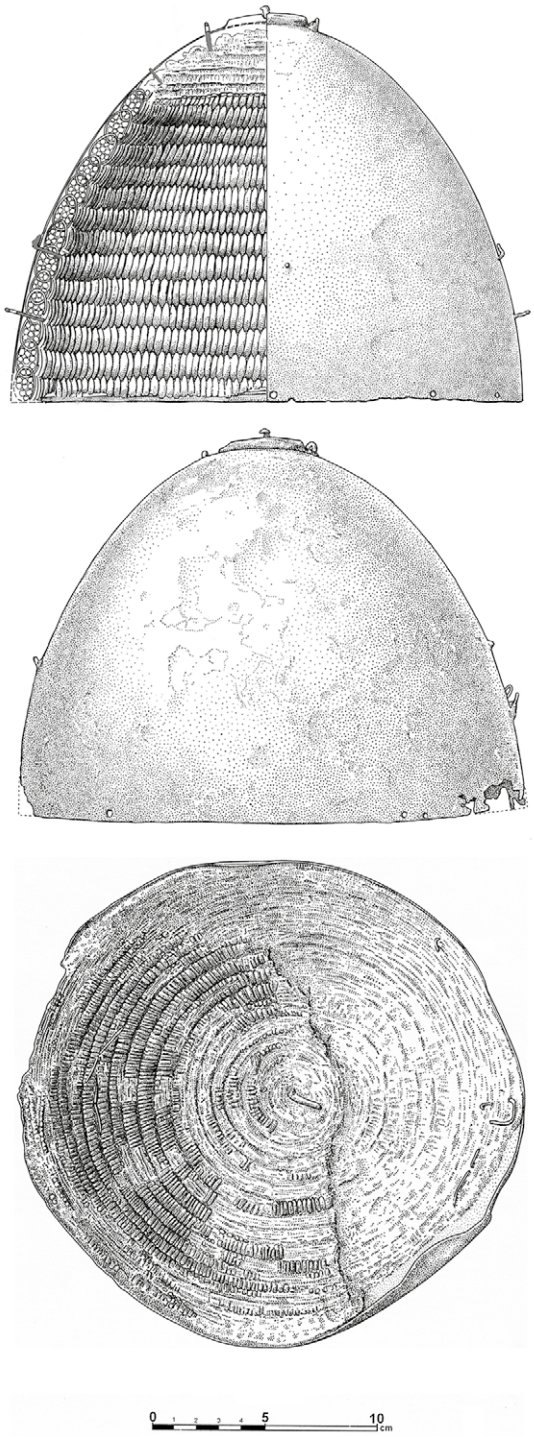

Figure 17: Conic helmet from the Greek Archaic wreck found in Cala Sant Vicenç (drawing: Ramon Álvarez, from Egg and Marzoli 2007).

Figure 18: Composite helmet from a private collection (photograph: Born and Nebelsick 1991: pl. III and V).

All three helmets have a well-preserved internal structure. They are baskets made of vegetable fibres that fit precisely into the hemispherical shape of the calottes. Some researchers have suggested that they were mass-produced, using a standardised model for most helmets to ensure the correct overlap of the organic and metallic parts. While there is no available data to disprove this assertion, we also lack any arguments to confirm it. It is evident that the organic component of these helmets works differently, or more intricately, than that of the Thracian helmet discussed above. Specifically, in these cases the organic material was designed to cushion impacts and improve the breathability of the inner lining.

The manufacture of these helmets purports to integrate organic and metallic parts through a precise system of internal hooks (Figure 20a-c) that incorporates the basket's ribs for attachment (Figure 21a-b). This requires a unique arrangement of hooks for each helmet, but also identifies a specific element responsible for attaching

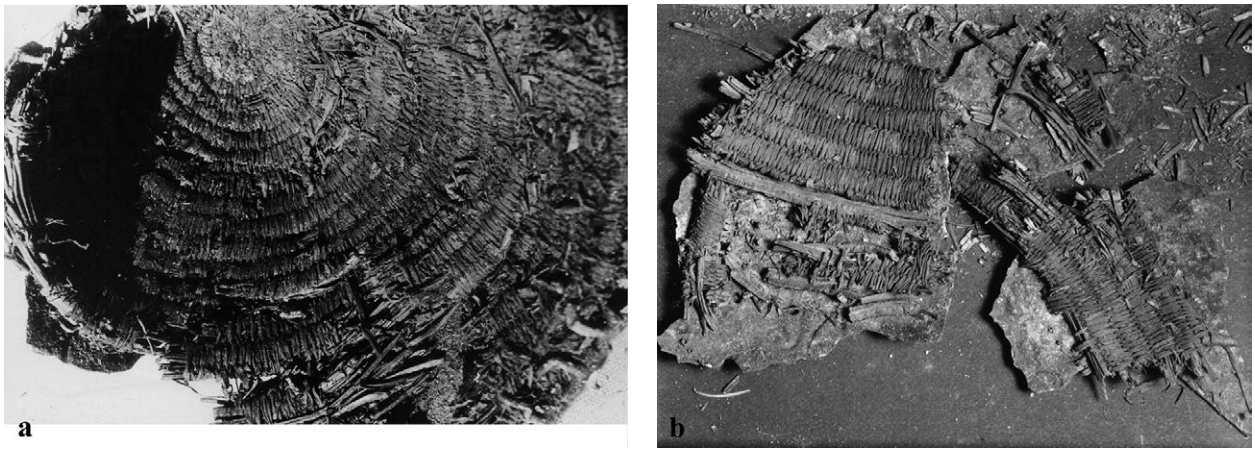

Figure 19: Composite helmet from Ordona, University of Leuven (photograph: Bild-Archive RGZM T80/552).

the organic part. Some scholars have suggested that the internal linings were fixed exclusively through perimeter perforations, but we will propose some other possibilities.

When examining the affixing system and structure of the basketry, it is perhaps surprising to note that traces of leather have been found on the helmets from Mallorca and the private collection. While H. Born's reconstruction of the Picene helmet proposes a complete covering,[87] it is not clear whether this was the case, since much of the basket did not have any leather remains. It would have most certainly been useful to benefit from topographical documentation of the location of these remains, to discuss whether they might have indeed covered the basket, or whether the leather was limited to covering the rim of the helmet or basket in order to avoid cuts and scratches.

Greek helmets showcase a similar problem, owing to their sharp edges and lack of protective rolling or other systems in their design. Additionally, there is often no evidence to be found that suggests that these helmets had any protective system or internal lining. The *Kegelhelme*-type helmets typically lack perimeter perforations,[88] while the examples decorated with a zoomorphic protome always feature them. These examples are all Italic in origin, and their metal and organic parts are always integrated. The study of the helmets from Ruvo and the Ceccanti collection has revealed that the zoomorphic protome was attached using rivets onto a helmet with the internal lining already in place. This is demonstrated by the greater length of the rivets, which also leave a gap between the calotte and the flattened end.[89]

Corinthian helmets, as well as other Greek helmets, do not seem to have had any kind of inner lining or edge protection.[90] This may be due to the presence of a heretofore unknown organic element.[91] Several Corinthian helmets recovered in Italy or from the Myros group showcase a perforated perimeter that was likely intended to protect the rim and to attach an internal lining.

Final Remarks

In spite of initial assumptions, the most significant indicator of the diverse craft traditions of ancient armour is often the least well-preserved component of the armour. Whether an integral part of the armour or a separate piece, the organic elements of the armour had a powerful impact on the use of each defensive armament. To achieve this, it is necessary to summarise the main results of the research on the topic, and to provide an overview of the differences between the cultural areas we have considered in the present study.

Archaic Greek cuirasses had outward-facing rolled edges, while Thracian cuirasses did not protect the edges (or, at least, not insofar as having left recognisable archaeological traces: holes, mineralised fabric, etc.). Etruscan and Italic cuirasses of the 5th century BC had perforated edges. South Italic anatomical cuirasses featured an inward folding of the metal sheet, which could be dangerous for the wearer if it was left unprotected as it could cause chafing or cuts.

The particular interpretation of these different features could be summarised in terms of possible ways to combine the use of metal and organic linings and cloths. For example, Greek and Thracian cuirasses did not incorporate organic material with the metal, unlike

[87] Born and Nebelsick 1991.
[88] Frielinghaus 2011.
[89] Graells i Fabregat 2019b.
[90] Frielinghaus 2011.
[91] On this point, see Castrizio 2007.

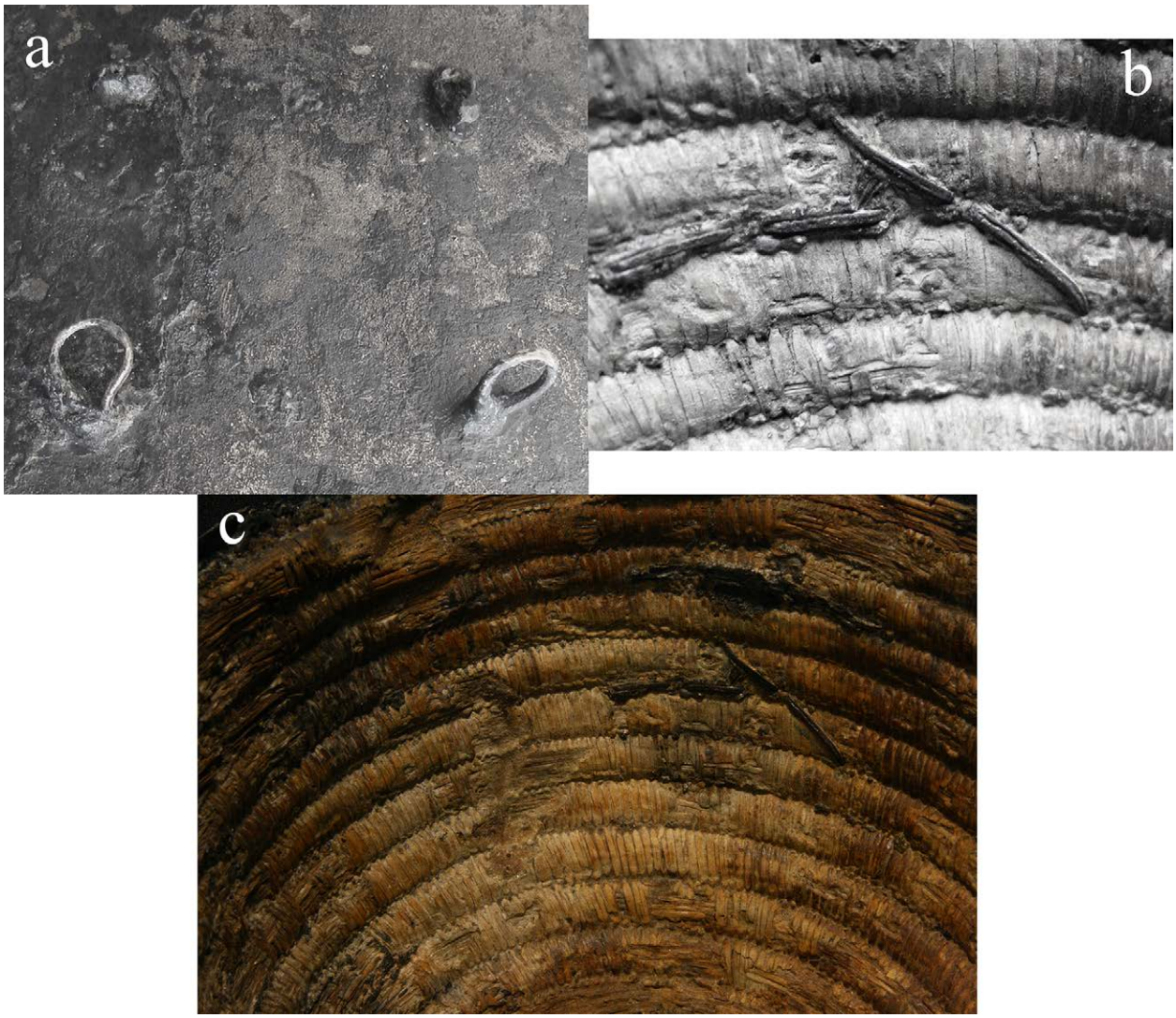

Figure 20: Conic helmet from the Archaic Greek wreck at Cala Sant Vicenç. Details of the hooks (a) and basketry (b), (c) (photographs: Marta Santos).

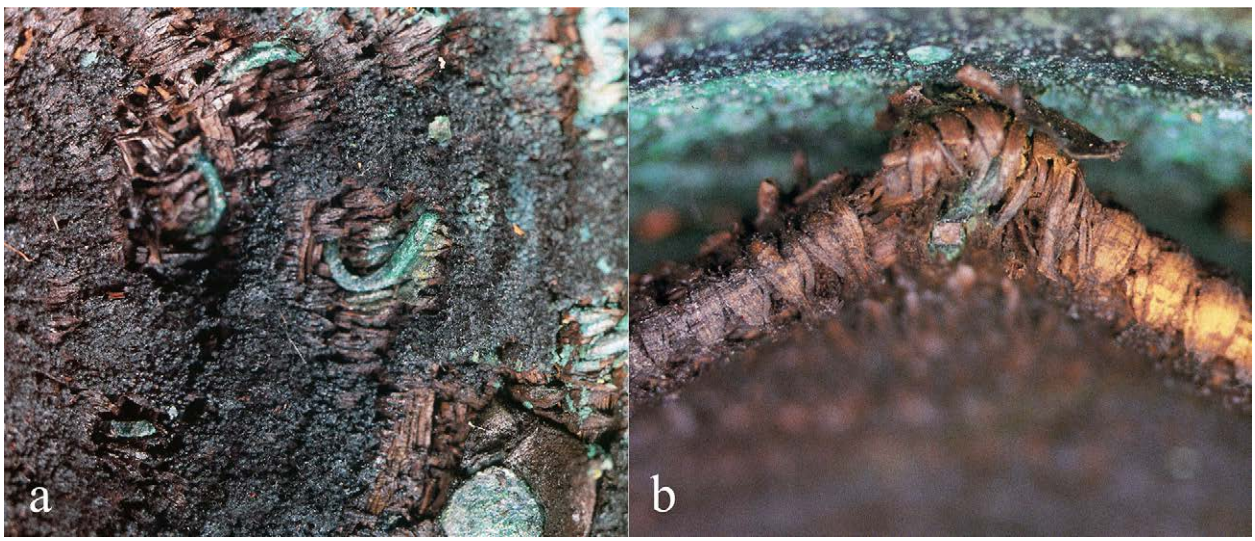

Figure 21: Composite helmet from a private collection. Details of the hooks (a) and basketry (b) (photographs: Born and Nebelsick 1991: pl. XV and XVI).

the Italic cuirasses which sewed the fabric to the metal or affixed it thereto using different pressure methods.

The same can be said about helmets, which present two opposing traditions: in the Greek and Thracian area, metal calottes without elements for the internal affixion of linings or without peripheral perforations to sew in some kind of protection for the potentially cutting edges, while the Italian area included these types of elements, as well as several fastening systems for the internal basket linings with small metal hooks.

Many of these conclusions may appear fragile, as they are not based on a systematic archaeological catalogue because cuirasses and helmets have thus far been systematically cleaned and restored without attention being paid to this matter. New research will undoubtedly bring further insights into this topic; even so, the presence of peripheral holes, bent edges and affixing elements constitute so many solid arguments for distinguishing between the two different traditions – not only in terms of chronology, but also in terms of cultural specificities.

This territorial adaptation reinforces what we have already seen in what purports to a different approach to craftsmanship, design, and ergonomics in the ancient Mediterranean which would have involved the assumptions of common models in local traditions that resulted from long term practice and use – in effect, traditions of use rather than particular techniques, as these can be reproduced. Identifying the reasons that led some traditions to integrate fabrics into their armour and others to use the organic base and metal covering independently is a difficult task that entails further consideration of climatic, economic and other circumstances that still remain broadly unknown. Nevertheless, it is important to show that the relationship between the organic and metallic parts of the armour was not a minor issue for those that designed and created them, being the result of long-term traditions that aimed to efficiently protect their wearers – a dialogue between defensive weapons with precise adaptation, at a time when versatile armour was extremely expensive. This relationship only changed from the second half of the 4th century onwards, with the mass production of organic armour for the soldiers.

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Protecting the Legionary's Head: Analysis of the Evidence of Lining in Roman Helmets from the Imperial Age

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Abstract: In the ancient world, the helmet was a crucial element of military equipment, providing essential protection for one of the soldier's most vulnerable points. The spread of metal helmets led to the development of further auxiliary protective systems: linings, probably called *centones* in Latin.[1] The use of linings is difficult to detect and, apart from rare finds, only indirect traces of their presence remain. The contribution aims to emphasise the importance of these components from the analysis of the documentation of Roman helmets from the Imperial age (from the 1st to the 5th century AD). The analysis will be supported by the examination of literary, iconographic and archaeological sources. Textile finds will be considered in order to unveil their morphology, the production method and how they were attached to the helmet. Moreover, the study will focus on indirect evidence of the use of linings: the presence of holes along the edges of the helmet bowl or the neck guard of the helmet for edging or sewing the padding. Finally, due to the integration of the above-mentioned sources, it will be possible not only to highlight the use of lining for helmets, but also to assume the use of different lining systems during the Imperial age.

Keywords: helmets, lining, Roman army, Roman empire, textiles

Introduction

This paper focuses on a topic strongly linked to textile artefacts and the military world: the use of lining inside Roman helmets from the Imperial age. Many scholars have stressed the importance of the use of linings inside metal helmets; indeed, the lining was necessary to absorb some of the kinetic energy of a blow and to avoid concussions or fractures.[2] The padding was also useful to stabilise the soldier's head within the helmet, relieve the weight of the helmet, prevent chafing and irritation from contact with the metal surface and limit the heat of the sun transferred from the surface of the helmet to the head.[3]

The present study aims to identify the parts of the helmet where the padding systems were located and hypothesise how these were attached to the helmet and the formal appearance they had. The latter aims to verify whether they were made as a single piece or whether they were separate and distinct elements. A further aspect that will be investigated concerns the raw materials used in their manufacture. These elements will lead us to identify a possible change in both the construction and morphology of lining systems.

The presence of an inner lining of helmets is documented in the *Iliad*, the most ancient source that mentions a lining. Homer describes Odysseus' helmet made of boar's tusks, the interior of which was lined with felt (μέσῃ δ' ἐνὶ πῖλος ἀρήρει, vs. 265).[4] Therefore, felt appears to be one of the most ancient materials used for under-helmet padding. Indeed, this material was comfortable for the wearer and allowed good absorption of blows, which was essential in battle.

Archaeological, iconographic and literary sources have been considered for a more holistic study of the subject. The archaeological sources have been divided into direct and indirect. The former category includes textile artefacts preserved to the present day, while the latter comprises elements whose presence might imply the existence of inner linings, including the holes located along the edges of the bowl and cheek-pieces.

The available sources will be analysed in chronological order by dividing them into three macro-periods: Early Imperial age (1st century AD); Middle Imperial age (2nd century AD-3rd century AD); Late Imperial age (4th century AD-5th century AD). This is obviously an artificial subdivision, but it allows us to observe any changes in the construction methods or the different types of lining applied to the helmets. Helmets of the Imperial age undergo formal and typological changes

[1] Amm. Marc. 19.8.8.
[2] Robinson 1975: 144.
[3] Paddock 1993: 67-68.
[4] Hom. *Il.* 10.260-265.The term used to indicate the felt is πῖλος.

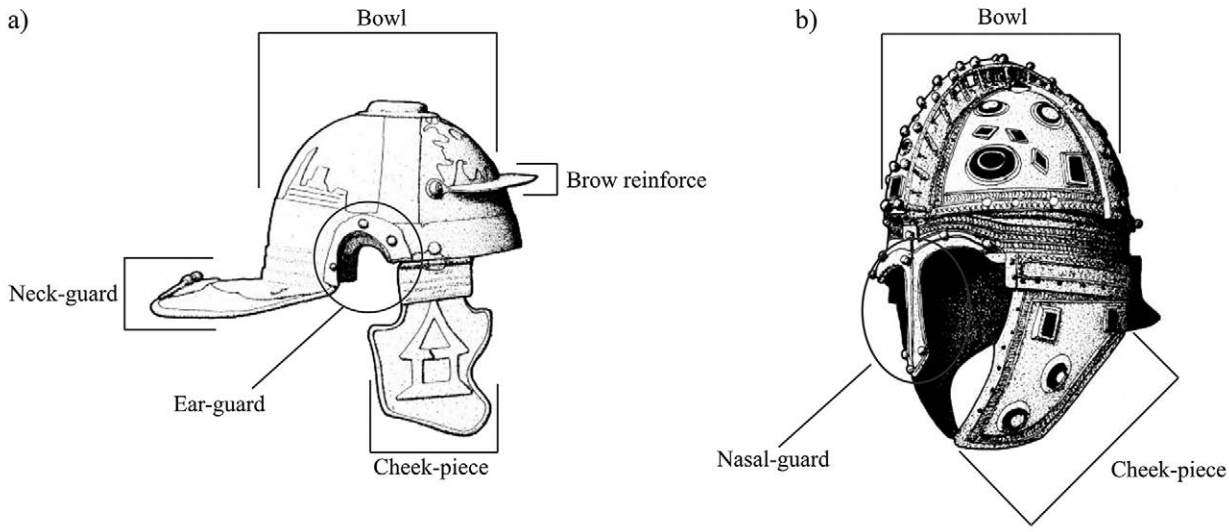

Figure 1: Components of the Roman Imperial helmet: a) Imperial-Italic D type helmet, from Mainz, Germany, 1st century AD; b) Berkasovo I helmet, from Berkasovo, Serbia, 4th century AD (drawings: after Bishop and Coulston 2006: 102, fig. 59.5, 212, fig. 135.4).

over the centuries. These modifications follow changes in combat tactics and in the weaponry itself. Although the helmet changes in its morphology, padding always remains necessary on the inside to complete the soldier's defence.

Despite the formal changes, Roman helmets consist of a few fundamental components (Figure 1).

The bowl is the widest and main part of a helmet. It is designed to protect the skull from enemy blows. The cheek-pieces are intended to defend the cheeks and temples. The neck guard, similarly, protects the neck and the nape from cuts and strikes from behind or above, while the brow reinforcement provides defence against frontal blows. The ear-guard covers the ear opening which is important not to muffle hearing during battle. Finally, Late Imperial age helmets also feature a nasal guard, a plate attached to the bowl to protect the nose. These components, as will be seen later, inevitably affect the shape of the padding, which must prevent direct contact between the metal surface and the soldier's head.

The Early Imperial age

The Vindonissa helmet

The first artefact to be analysed is an iron helmet found in 1989 in Vindonissa, Switzerland.[5] The specimen was found inside a pit located near an artisanal area, where ceramic kilns from the late Augustan period were found.[6] The area was in direct contact with the military quarter of the camp. The helmet can be classified as Robinson type Imperial-Gallic helmet B or C due to the presence of the curved eyebrows, the broad straight neck guard preceded by three outwardly embossed ribs at the end of the bowl.[7] In addition, there are two small cutouts for the ears without further bronze reinforcement. Due to its characteristics, it can be compared with a helmet from the Augustan period found in Oberaden, Germany.[8] Thus, the dating of the find is determined by both the context of its discovery and the shape of the helmet itself: it can be traced back to the late Augustan period.

During the discovery, several organic remains were found preserved both inside and outside the helmet (Figure 2a).

These were preserved through the process of iron oxidation, which began immediately after deposition. Inside the helmet, sheep hair felt was found. This lining followed the surface of the helmet but was also detectable on the cheek-pieces laid inside the bowl (Figure 2b).[9]

On the exterior of the helmet, the situation is more complex: at least two layers can be recognised. Underneath the first layer of leather, a second layer of fur was identified: it rests directly on the helmet bowl

[5] Inv. no. V.89.2/78.1, Vindonissa-Museum, Brugg (Switzerland).

[6] Deschler Erb *et al.* 2004: 3.
[7] Robinson 1975: 45-46.
[8] Deschler Erb *et al.* 2004: 6.
[9] Deschler Erb *et al.* 2004: 7.

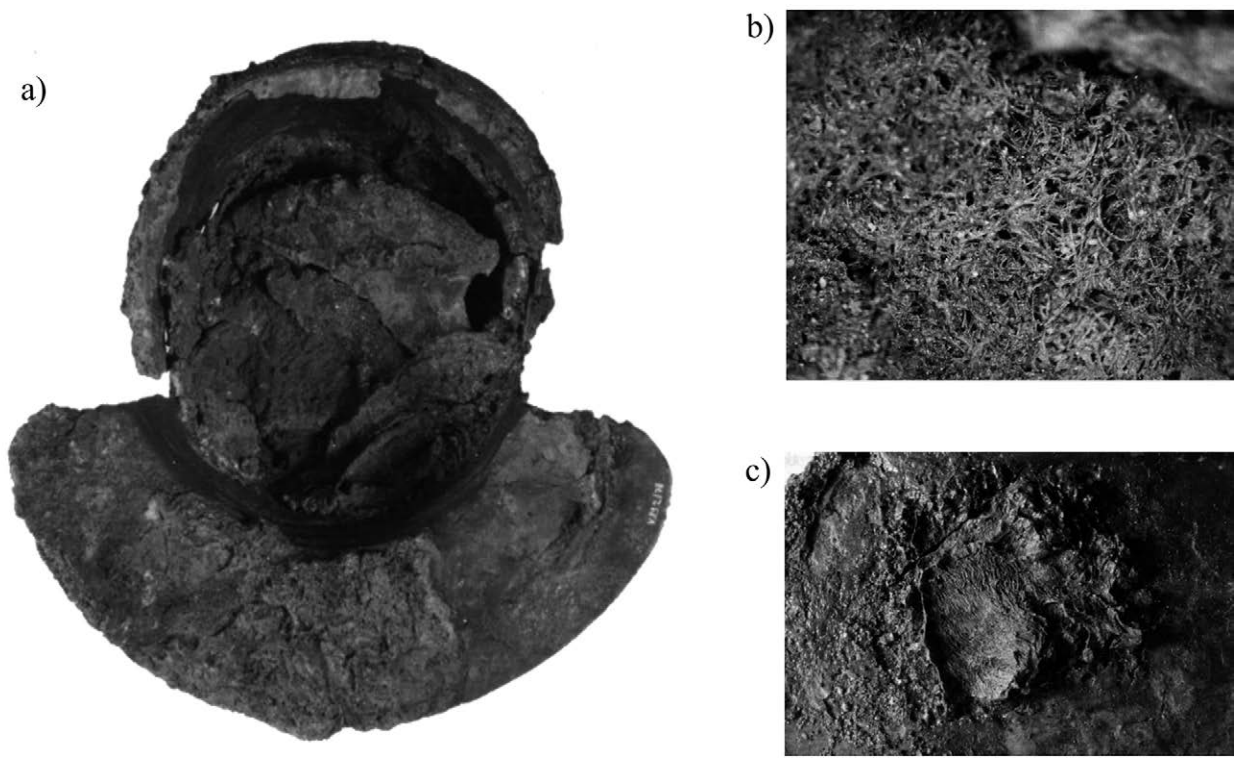

Figure 2: a) The Vindonissa helmet after restoration, view from the inside; b) Felt inside the helmet; c) Remnants of fur on the helmet neck-guard (photographs: after Deschler-Erb *et al.* 2004: 7, fig. 4, 9, fig. 6).

(Figure 2c). This suggests a covering made of fur, which was itself overlaid with an additional layer of leather. The helmet likely had an outer decoration with a fur coat in a manner like that which was employed by certain military figures such as *signifer* or *aquilifer*.[10] On the other hand, the leather covering could have belonged to a helmet storage case. This had probably been made specifically for the helmet: a series of stitches at a distance of 23 mm following the frontal band in its course have been detected. It can be assumed that an additional strip of leather was sewn on for decorative purposes, for example, a *tabula ansata* as evidenced on the shield covers.[11]

It should be pointed out that the helmet was equipped with padding only made of felt, which could be a removable cap or could be attached to the helmet. It is also impossible to determine whether the cheek-pieces part was padded separately or whether it was instead made as a single piece together with the cap as other finds will show.

The Vindonissa leather caps

From the site of Vindonissa come further finds interpreted by A. Gansser-Burckhardt as possible helmet linings. These are two leather elements shaped like a cap, found in a dump excavated between 1946 and 1948.[12]

The first fragment consists of the bowl, part of the border and the neck protection. The rim also has seams. Parts of the cap and about 2/3 of the border had been replaced and repaired. While the original part is made of calfskin, the additional parts are made of goatskin. According to the author, this hat was glued on canvas and fastened to the rim with cotton thread.

The second fragment, on the other hand, consists only of part of the cap and, according to the author, was part of a cone-shaped hat made from a single piece of leather in a circular shape.[13] According to the proposed reconstruction of this padding, which appeared to be missing the top part, it might have been appropriate for a helmet with a ring apex[14] or, more likely, a Coolus-

[10] A combination of leather and fur is also found on the modified Imperial-Gallic helmet from Krefeld (Germany). However, the leather does not seem to cover the fur in this case (Reichmann 1994: 6f.).
[11] Deschler Erb *et al.* 2004: 10.
[12] Gansser-Burckhardt 1947-48: 29.
[13] Gansser-Burckhardt 1947-48: 42-43.
[14] Gansser-Burckhardt 1947-48: 42.

type helmet, very common among legionaries of the Early Imperial period.

Several aspects cast doubt on whether these leather fragments belong to legionary helmet linings. Both were found without an association with a metal helmet. Moreover, as observed by both H. R. Robinson and J. M. Paddock, leather is undoubtedly a durable material, but it is not comfortable when wet, especially when subjected to sweat frequently.[15] If not treated with oil, it tends to become hard and dry. A fabric, on the other hand, allows air to enter and circulate while leather would retain the heat of the head, causing irritation and discomfort to the soldier. During the cleaning of the leather cap I, individual textile fibres and pieces of fabric were uncovered. These have not been further specified, but they appear to have come from a covering material.[16] It is therefore likely that the leather was only part of the padding system, whereas the legionary's head was in contact with textile material, which was more suitable and comfortable for this function.

The Hellange face mask

Further data on the fastening systems of the lining are provided by a face mask that was part of a cavalry helmet found in 1853 at Hellange in Luxembourg.[17] The artefact came from a cremation burial within a first-century AD necropolis.[18] The tomb consisted of a rectangular grave with the remains of the deceased placed inside a stone urn, while the grave goods were mainly arranged around it. The mask was located 30 cm north of the urn and was close to the glass vessels: a *balsamarium*, two large ribbed cups and a small ribbed cup.[19] The burial can be dated to the second quarter of the 1st century AD based on the grave goods. The bronze mask was part of an iron helmet of which a few fragments remain. According to Robinson, it belongs to the Cavalry Sport helmet E type, which is characterised by female masks (Figure 3a);[20] the helmet bowl must have been similar to that of the Weiler and Xanten-Wardt helmets.[21]

The presence of medallions decorated with recurring images in other cavalry helmets identifiable as *phalerae* would suggest that this helmet was a reward for the military valour of the deceased, who was certainly part of an elite unit. At the time of its discovery, the remains of a resinous substance that acted as glue for the attachment of the padding to the helmet itself were reported.[22] Therefore these helmets likely featured lining on the inside of the mask as well, in order to avoid direct contact between the face and the metal.

The Hod Hill cheek-piece

Regarding the western provinces of the empire, a cheek-piece of an iron helmet comes from Hod Hill Fort in Dorset, England.[23] This fortification was built on top of a pre-existing Iron Age settlement conquered by the Romans between AD 43 and 44. Unfortunately, the artefact comes from the Durden Collection purchased by the British Museum and consequently lacks the precise context of its discovery. Based on the morphological study of the object, it is possible to make some chronological considerations.[24] The cheek-piece belongs to an Imperial-Gallic type F helmet (Figure 3b). The edges are bronze on a silver foil and it has a single decorative bronze boss. It finds a very close comparison with a helmet found in Besançon (France) and, according to Robinson, it can be dated to the early period of the camp, between AD 43 and 51.[25] The inner surface of the cheek-piece shows traces of a coarse weave fabric probably made of linen. Unfortunately, no extensive analyses of the artefact have been carried out to confirm the exact type of fibre and weave used.

The Newstead helmets

Another important context is provided by the Roman fort at Newstead, Scotland, founded by Agricola in AD 78. During excavations of the camp, conducted in March 1906 under the direction of Prof. J. Curle, three helmets were found. Two were made of iron while the third was made of brass. The iron helmets came from two different pits, located along the southern and western sides of the fort respectively.[26] The first[27] is an undecorated iron helmet with a simple shape, classified as an Auxiliary Cavalry Type A helmet, dated to the Flavian age (Figure 3c).[28] Inside the bowl traces of wool lining were found, probably related to the presence of the inner padding. The second find[29], pertaining to the same chronology, is made of iron coated with silver foil and consists of two parts, the bowl and the face mask, embossed. The specimen can be attributed to the Robinson Cavalry Sport Type C helmet (Figure 3d).[30] The artefact, crafted with exceptional workmanship and artistic quality, represents the idealised face of a young boy, with forehead and ears framed by locks of curly hair. At the time of its discovery, the study of the helmet revealed a thin layer of inner wool padding

[15] Paddock 1993: 68; Robinson 1975: 144.
[16] Gansser-Burckhardt 1947-48: 41.
[17] Inv. no. 3-479, Musée national d'archéologie, d'histoire et d'art, Luxembourg (Luxembourg).
[18] Namur 1854: 1-23.
[19] Krier 1991: 142-143.
[20] Robinson 1975: 124-125.
[21] Krier 1991: 134.
[22] Müller 1912: 42; Robinson 1975: 144.
[23] Inv. no. 1892,0901.1209, British Museum, London (UK).
[24] Brailsford 1962: 5, B1.
[25] Robinson 1975: 56.
[26] Manning 2005: 119.
[27] Inv. no. X FRA 124, National Museums of Scotland, Edinburgh (UK).
[28] Robinson 1975: 95.
[29] Inv. no. X.FRA 121, National Museums of Scotland, Edinburgh (UK).
[30] Robinson 1975: 115-117.

Figure 3: a) Bronze face mask from Tomb A of Hellange, Luxembourg (photograph: after Krier 1991: 150, fig. a); b) Iron helmet cheek-piece from Hod Hill, United Kingdom, with traces of woven fabric (photograph: after Robinson 1975: 57, fig. 123); c) Iron helmet from Newstead, United Kingdom (photograph: after Robinson 1975: 94, fig. 246); d) Cavalry helmet from Newstead, United Kingdom (photograph: after Curle 1911: pl. XXIX); e) Brass helmet from Newstead, United Kingdom (photograph: after Robinson 1975: 112, fig. 315).

placed to protect both the bowl and the face mask, the left side of which is very well preserved. The lining was attached to the metal by means of a layer of resin that became sticky on contact with hot water.[31]

The third specimen from Newstead is the brass helmet,[32] belonging to the Robinson Cavalry Sport Type B helmet, also dated to the Flavian age (Figure 3e).[33] Curle and Robinson mention a leather fragment found adhering to a rivet inside the helmet.[34] However, considering the method by which the mask was attached to the helmet bowl and the properties of leather that make it unsuitable for internal padding, this could be a washer between the hinge for attaching the face mask and the inside of the helmet bowl.[35] It was almost certainly not part of a leather lining, as it would have been inserted after the hinge had already been riveted in place. Moreover, leather does not dissipate the force and blows of enemy weapons.

The Didymoi caps

Two probable helmet linings have been found in Egypt at Dydimoi, a small *praesidium* founded along the road between Berenice and Coptos in AD 76-77. The site began to decline around AD 150, eventually leading to its abandonment. From the site's dumps come numerous textile artefacts, pertaining to both civilian and military life. The helmet linings were found in the dump layers corresponding to phase 2 and phase 6 of the fills, both dated to AD 96.[36]

The first object is a circular hat, measuring 17.5 cm x 20 cm.[37] It is made of triangular segments of different

[31] Curle 1911: 170.
[32] Inv. no. X.FRA 125, National Museums of Scotland, Edinburgh (UK).
[33] Robinson 1975: 112-113.
[34] Curle 1911: 166; Robinson 1975: 144.
[35] Robinson 1975: 144.
[36] Cardon *et al.* 2011: 273.
[37] Inv. no. D99.2436.17.

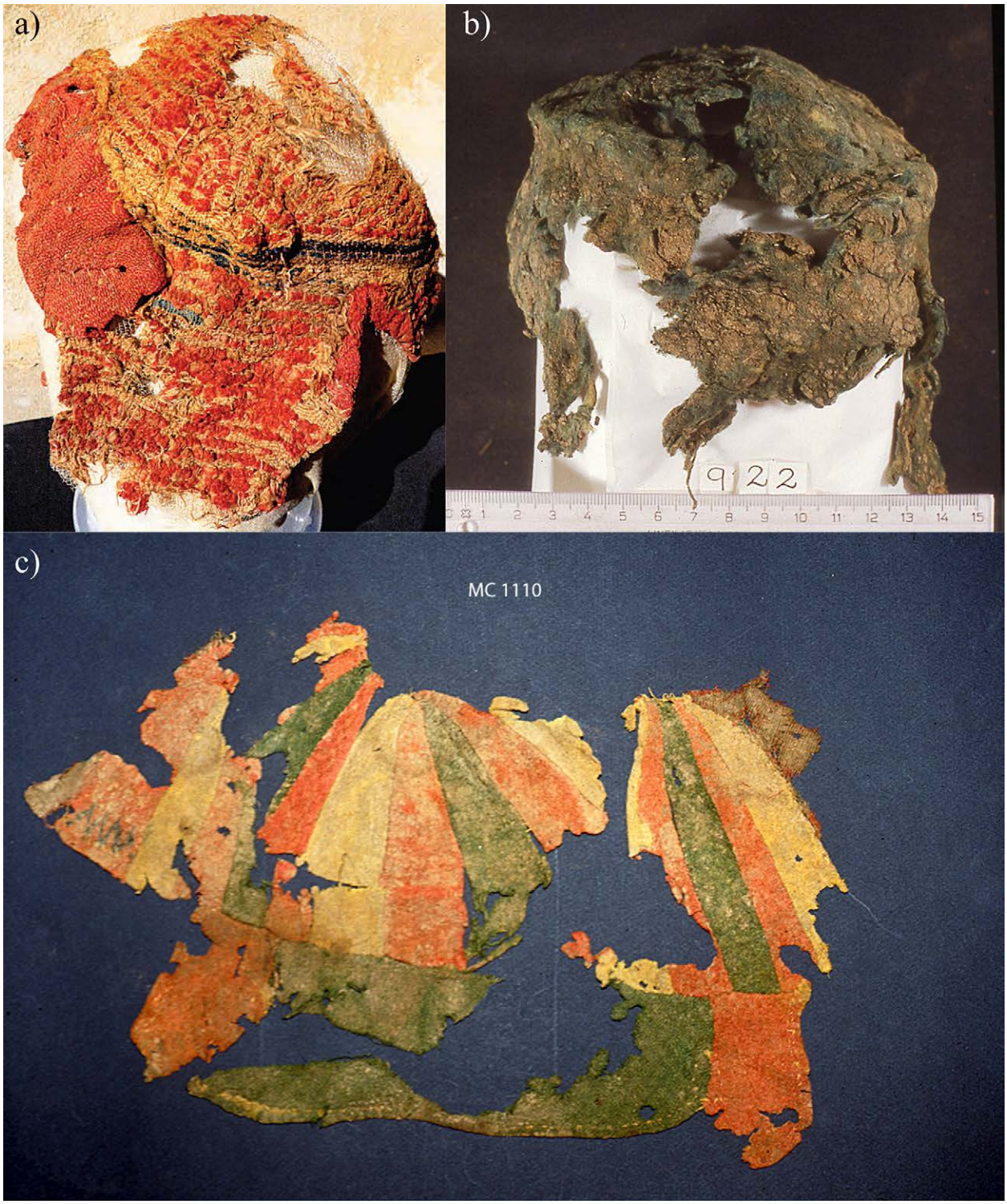

Figure 4: a) Wollen and linen cap from Didymoi, Egypt (photograph: after Wild 2020: 78, fig. 3.19); b) Green felt hat from Mons Claudianus, Egypt (photograph: after Jørgensen 2018: fig. 7); c) Hat made of triangular scraps of felt from Mons Claudianus, Egypt (photograph: after Jørgensen 2018: fig. 8).

types of wool fabric of various colours, sewn together along the edges with linen thread. A circular piece of red wool fabric was attached on top using brown wool thread. A border formed by a yellow cord was then added around the top, finished at the bottom by a textile binding around the perimeter.[38]

The second specimen, measuring 29 cm x 25 cm, is sewn together from scraps of wool or linen fabrics of different colour and quality. It is further reinforced by a thin, continuous fabric layer sewn onto the back (Figure 4a).[39]

Studies carried out on this cap have revealed four parts of different fabrics in its composition. The outer layer of the padding is made of a coarse linen fabric woven in a plain weave. The second fabric, made of wool, comes from the remnants of a flat-shouldered tunic and is sewn together with two reinforced selvedges, also in plain weave. The third piece comes from a discarded cloak, with sewn selvedges, and woven in twill. Finally, the cap is composed of two fragments from a wool tunic: one of these, referred to as fragment A, still has a purple 'H' sewn into it.[40] The wool fragments make up the main body of the lining, while the linen fragment forms not only the front part of the cap, but also extends along all the edges, bordering both the cheek parts and the back.

The Middle Imperial age

The hats from Mons Claudianus

During the Middle Imperial age, some of the best-preserved archaeological sources come from the site of the Roman quarry at Mons Claudianus in Egypt, which was exploited for granodiorite deposits. The dry climate allowed the preservation of three finds that in terms of shape, size and material are well comparable to inner helmet pads.[41]

The first object is similar to a green felt *pileus pannonicus* type cap[42] and is dated between AD 100 and 120 (Figure 4b).[43] The second artefact[44], dated between AD 100 and 140, has two earmuffs and a neck guard and is composed of triangular scraps (*centi*) of felt in three alternating colours: red, green and yellow. It is completed by a green triangle on the back and two red ones on the front.[45] This artefact, when reconstructed, takes the shape of a helmet and is interpreted as an inner lining (Figure 4c).

This is not the only attested instance of padding made from scraps of fabric that were reused, cut and sewn to make new artefacts. A similar example from Krokodilò in Egypt was also assembled from scraps that belonged to different textiles.[46]

The third find[47] from Mons Claudianus, dated between AD 100 and 120, was made from an undyed piece of fabric that had a red button on the top.[48]

The Trajan's Column

The iconography also seems to confirm the use of glues or other fastening systems to stabilise the padding inside the helmets. In several scenes from the Trajan's Column, dated to AD 113, soldiers are depicted marching with their helmets hanging on their armour, probably tied by the handle on the neck guard. However, the legionaries are depicted with their heads uncovered and their hair well-defined by the sculptor. Therefore, this suggests that the padding had to be firmly attached inside: otherwise, it could easily have fallen out during travel.

The Dura Europos cap

A significant find comes from the city of Dura Europos, located in eastern Syria.[49] In the 3rd century AD, the northern sector of the city became a Roman military base. Several areas of the civilian city were adapted to military needs, including the construction of headquarters; baths and an amphitheatre were also built. In AD 250, the garrison sets up further fortifications throughout the city, creating a glacis on the western side and a huge embankment encompassing all buildings near the defences. However, just a few years later, in AD 256-257 the fortress was conquered by the Sasanians.[50] Following its capture, the town was abandoned.

The hat of Dura Europos comes from block L8, where other military items were found, probably belonging to Roman soldiers: among them, there are fragments of a bronze scale armour with an embossed effigy of Minerva. The Dura Europos hat is made of a single piece of wool, but it is not entirely preserved. Parts of the edges and ends of the ear tabs are missing. Regarding its manufacturing process, an undyed wool felt lining was sewn on with undyed wool thread. It appears to have been dyed after weaving with a dark brown colour.[51]

[38] Cardon *et al.* 2011: 347-349, pl. 30 c-d.
[39] Inv. no. D98.2511.2.
[40] Cardon *et al.* 2011: 279-280, pl. 8c.
[41] Bender Jørgensen 2017: 231; 2018: 2.
[42] Inv. no. MC 922.
[43] Bender Jørgensen 2018: fig. 7; Mannering 2006: 1110, MC 922.
[44] Inv. no. MC 1110.
[45] Bender Jørgensen 2018: fig. 8.
[46] Cardon 2003: 647-648, pl. Vc.
[47] Inv. no. MC 548.
[48] Mannering 2006: 158, fig. 8.
[49] Inv. no. 1938.5673, Yale University Art Gallery, New Haven (USA).
[50] James 2020: 2208-2214.
[51] James 2004: 108-109.

Figure 5: a) Gravestone of Marcus Aurelius Alexys (photograph: after Cowan 2009: 31); b) Soldiers on the march equipped with *pilos* cap in a scene on the Arch of Constantine (photograph: after Macdowall and Embleton 1994: 32).

According to S. James, the shape of the hat suggests it was intended as a protective liner to be worn under a helmet.[52] It is well padded with an additional layer of felt to absorb sweat, minimise chafing and help dissipate shocks from blows. The upper part, slightly pointed, was strongly folded up on itself and flattened. The same author maintains that its characteristics would make it suitable for Roman helmets of the Niederbieber-Buch type that are clearly attested at Dura Europos.[53]

The Dura Europos cheek-piece

An iron cheek-piece[54] coming from the same site of Dura Europos could indicate a different padding attachment system. This artefact is the right cheek-piece of a helmet belonging to the Robinson Auxiliary Cavalry helmet Type E or F[55] and to Bishop and Coulston Niederbieber-Buch type.[56] The cheek-piece is dated between the late 2nd century AD and the first half of the 3rd century AD. Contrary to Robinson's assertion,[57] it is likely that these helmets were also used by the infantry, given the presence of legionary troops in the places where similar helmets have been found. On its inner side, there are three small rivets, which are not useful for fixing the cheek-piece to the bowl. James[58] has suggested that these elements may have been intended for fixing the lining. It is therefore possible that, at least for the padding of the cheek-pieces, a new system was used at this time, one that complemented or even replaced the use of resinous glues.

The gravestone of Marcus Aurelius Alexys

Regarding iconographic sources from the Middle Imperial age, a funerary relief dated to the beginning of the 3rd century AD portrays the figure of a soldier from Sparta named Marcus Aurelius Alexys, who had fought against the Parthians (Figure 5a).[59]

The deceased is depicted as wearing a *pilos* cap, a *sagum* cloak, a *lorica segmentata* armour, a sword, an oval shield and a club in his right hand.[60] While the *pilos* cap is typical of the clothing of the Greek soldier, particularly from the Laconian region, as early as the Classical period, it must be emphasised that it was often used as padding for the helmet. The conical shape and the felt that it is made of were suitable for protecting the soldier's head inside the helmet. The stela of Marcus Aurelius Alexys is not the only example of a Laconian soldier depicted during the time of Caracalla: all such representations show soldiers equipped with *pilos* caps. A similar hat serving the same purpose will be characteristic of the Late Imperial period: the *pileus pannonicus*.

The Late Imperial age

The written sources

In the Late Imperial age, one of the literary sources that attests the presence of the padding under the helmet is the *Res Gestae* by Ammianus Marcellinus. The relevant

[52] James 2004: 109.
[53] James 2004: 102-103.
[54] Inv. no. 1938.5999.1001, Yale University Art Gallery, New Haven (USA).
[55] Robinson 1975: 97-99.
[56] Bishop and Coulston 2006: 176.
[57] Robinson 1975: 89-94.
[58] James 1990: 132, pl. 2.1.G.
[59] Inv. no. AM 1290, National Archaeological Museum, Athens (Greece).
[60] Kennel 2009: 285-286.

passage describes a brief pause during Ammianus' own escape along with his companions from Amida in AD 359. Because of the depth of the well where they were to quench their thirst, one of them used his *centonem* to soak up the water ('[...] centonem, quem sub galea unum ferebat e nostris [...]').[61] The term *centonem* refers to the cap worn under the helmet and protected by it. In this case, it does not appear to be a lining adhered to the helmet, but a separate cap that could be slipped off and worn independently. Based on iconographic evidence, it is likely that the cap mentioned by Ammianus corresponds to the *pileus pannonicus*.

Further written evidence comes from the *Epitoma rei militaris* by Vegetius written between the end of the 4th and the beginning of the 5th century AD. He states: 'Almost to this day, the custom of all soldiers to wear a fur cap, which they call *pannonicus*, has survived'.[62] The expression 'to the present day' emphasises the use of a sub-helmet that has been going on since more ancient times. The term *consuetudo* ('custom') chosen by the author also confirms this reconstruction. Vegetius refers to a specific sub-helm in use at the time of writing (4th-5th century AD): the *pileus pannonicus*, mentioned in the second line of the source ('pileos quos pannonicos vocabant'). This cap is also well identifiable in Late Imperial iconography, e.g. in some scenes on the Arch of Constantine, where soldiers are depicted wearing a cylindrical hat (Figure 5b). Vegetius, therefore, provides insight on two key aspects: the existence of a lining or cap worn under the helmet, the *pileus*, and the habit of using this element.

The Deurne helmet

One of the most representative archaeological finds from the Late Imperial age is the helmet from Deurne in the Netherlands (Figure 6a).[63]

It is part of an assemblage of materials found in 1910, belonging to an officer of the Stablesian *equites*, as the inscription on the helmet 'Stablesia VI' would indicate. Alongside the helmet, a sword, a fibula, a pair of shoes with spurs, remnants of textiles and a bag with coins dating to AD 320 were also found.

The iron helmet belongs to the category of the 'ridge helmets', specifically the Berkasovo type variant.[64] It is covered with a silver foil with a four-piece bowl; the rim-band curves over the eyes and includes a riveted nasal piece. The cheek-pieces and neck guard have holes for stitching on the sides.

Unfortunately, research has primarily focused on the metal elements, despite the fortunate preservation of leather and fabric components. Indeed, there is a mention of the extraction from the inside of what appeared to be felt padding during the washing of the helmet.[65] It is possible that this was the remaining part of the *pileus pannonicus*.

Intercisa type helmets

The Intercisa type helmets belong to the category of the 'ridge helmets' and they are characteristic of the Late Imperial age. Some of their features allow some considerations on the inner padding. According to Bishop and Coulston,[66] the cheek-pieces and the neck guard on these helmets were not attached to the bowl with rivets but were sewn directly onto a leather or fabric lining that was then affixed to the helmet bowl.

This construction method is clearly visible in several extant specimens. On the helmet found in Augst (Switzerland) the holes run along the rim of the bowl (Figure 6b), the cheek-pieces and the neck guard. In contrast, on another helmet from Worms (Germany), the holes are found only in the cheek-pieces and the neck guard (Figure 6c). A different variation is observed in the Intercisa metal crested helmet, where the holes only characterise the side edge of the helmet bowl (Figure 6d).

It is therefore likely that in this group of helmets the padding was made in a single piece including the cheek-pieces and the neck guard. The metal parts were attached by stitching or glued with resinous adhesive to the helmets without the need for additional perforations.

The possibility that the connection between the bowl and the other elements was made with leather straps and that the padding was glued cannot be completely excluded, but this seems unlikely for the Augst helmet for which a fewer holes would have been required. Nevertheless, the holes may have been used to simply sew a leather border, as evidenced in the Planig specimen belonging to the Baldenheim type *Spangenhelm*.[67]

These padding methods also raise interpretative difficulties regarding the use of the *pileus pannonicus*, which according to literary sources was worn under the helmet. Since the *pileus* did not include cheek protections, these elements must have been made

[61] Amm. Marc. 19.8.8.
[62] Veg. *Mil.* 1.20: 'Usque ad praesentem prope aetatem consuetudo permansit, ut omnes milites pileos, quos pannonicos vocabant, ex pellibus uteretur'.
[63] Inv. no. K 1911/4.1-5, Rijksmuseum van Oudheden, Leiden (Netherlands).
[64] Bishop and Coulston 2006: 210.
[65] Driel-Murray 2000: 307.
[66] Bishop and Coulston 2006: 210.
[67] James 1986: 113-114, fig. 7.

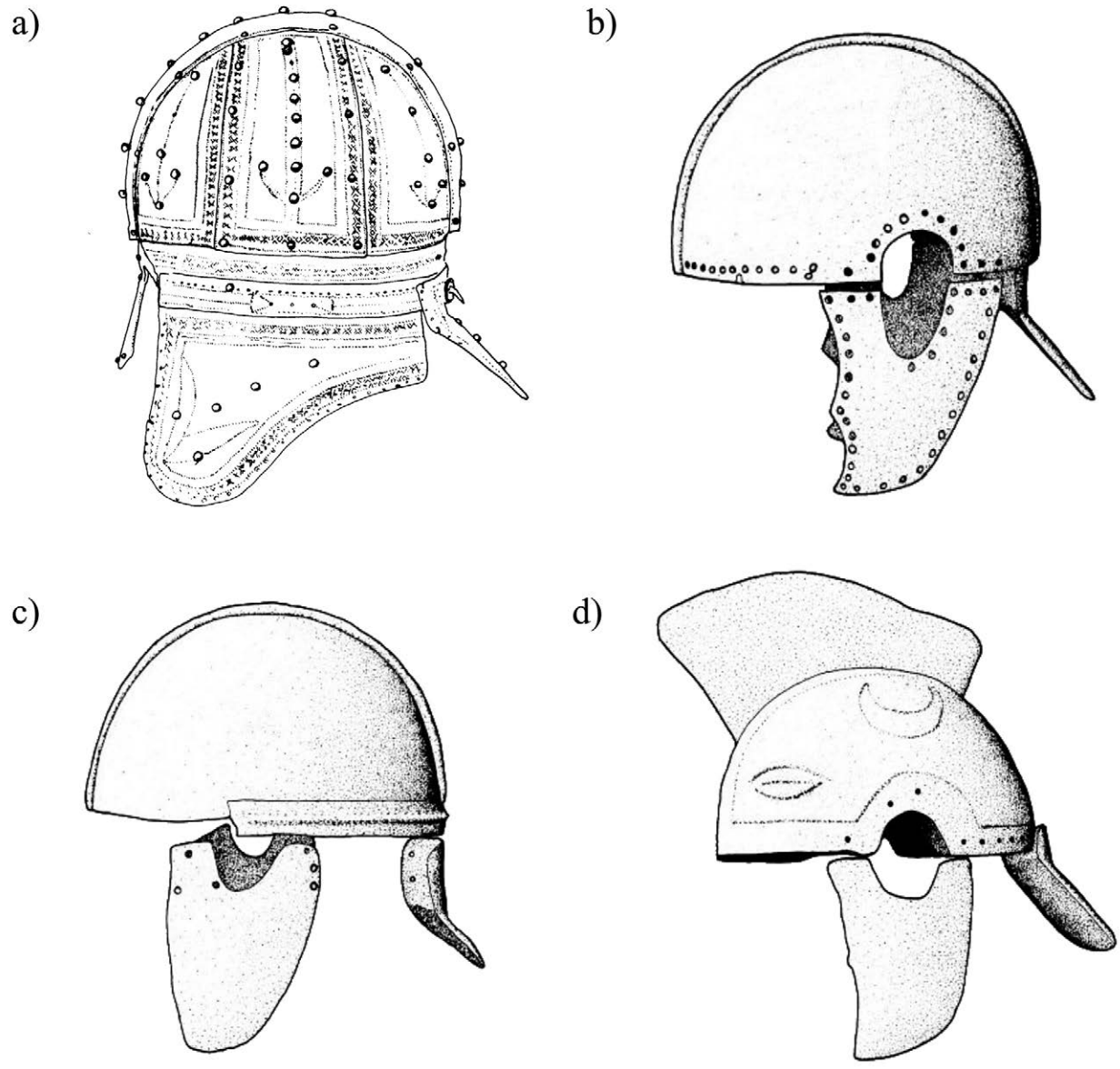

Figure 6: a) The Deurne helmet, Netherlands (drawing: after Johnson 1980: 308, fig. 3, b); b) Intercisa helmet from Augst, Switzerland (drawing: after Bishop and Coulston 2006: 211, fig. 134, n. 3); c) Intercisa helmet from Worms, Germany (drawing: after Bishop and Coulston 2006: 211, fig. 134, n. 4); d) Intercisa helmet from Intercisa, Hungary (drawing: after Bishop and Coulston 2006: 211, fig. 134, n. 2).

separately and glued or sewn onto the metal part, as in the case of the Deurne helmet. Otherwise, the *pileus* may have been worn as additional layer under a single-piece padding.

Discussion

The study took into consideration 19 finds from 11 sites, dated from the Augustan age to the late 4th century AD - early 5th century AD (Figure 7a).

However, among these finds, only 11 specimens are textile remains (Table 1). This is due both to the perishable nature of these materials and the lack of interest and attention paid to them when the helmets were found, as seen with the Deurne helmet. Regarding the first matter, archaeological textiles do not survive in many geographical areas because of unfavourable climatic conditions. The only process that permits their conservation is mineralisation.

Excluding leather, whose use remains doubtful, the use of felt, linen and wool is attested (Figure 7b). Furthermore, felt and textiles were suitable for absorbing the blows of enemy attacks, were comfortable and allowed the skin of the soldier to perspire. The presence of organic

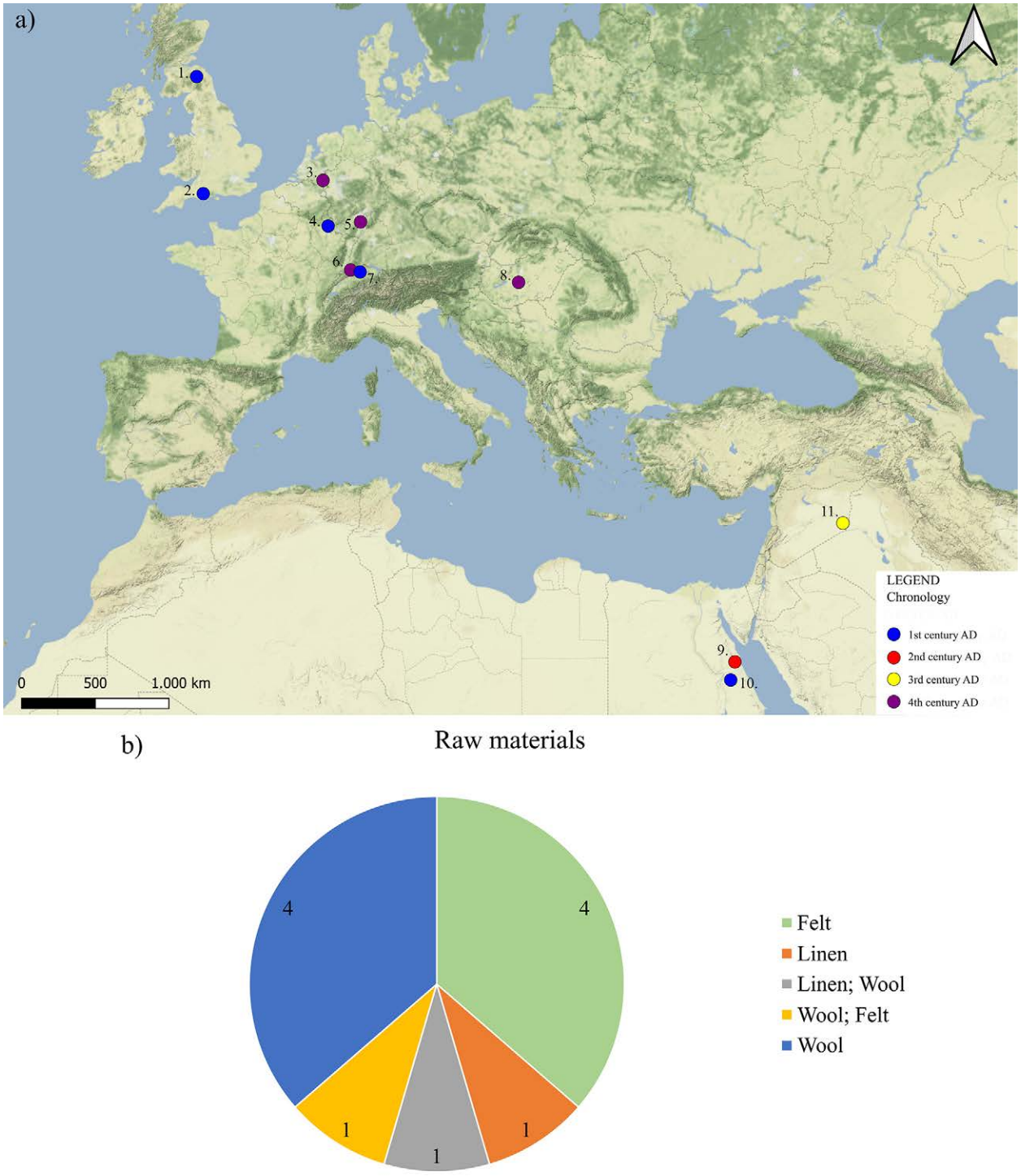

Figure 7: a) Distribution map of the archaeological finds under study, showing their discovery sites and chronology divided by centuries (elaboration: the authors). 1. Newstead (United Kingdom): organic elements on an Auxiliary Cavalry type A helmet, organic elements on a Cavalry Sport type C helmet, organic element on a Cavalry Sport type B helmet; 2. Hod Hill (United Kingdom): organic elements on a cheek-piece of an Imperial-Gallic type F helmet; 3. Deurne (Netherlands): organic elements on a ridge type helmet, variant Berkasovo; 4. Hellange (Luxembourg): resinous substance on Cavalry Sport type E helmet face mask; 5. Worms (Germany): stitching holes on a Intercisa type ridge helmet; 6. Augst (Switzerland): stiching holes on a Intercisa type ridge helmet; 7. Vindonissa (Switzerland): organic elements on Imperial-Gallic type B or C helmet, two calotte leather caps; 8. Intercisa (Hungary): stitching holes on a Intercisa type ridge helmet; 9. Mons Claudianus (Egypt): felt cylindrical cap, felt cap with a calotte shape and cheek flaps, woollen cap with a red button on the top; 10. Didymoi (Egypt): woollen and linen cap with a calotte shape and cheek flaps, woollen cap with a calotte shape; 11. Dura Europos (Syria): felt and woollen cap with a calotte shape and cheek flaps, rivets on the inner surface of a cheek-piece of an Auxiliary Cavalry type D-E-F helmet; b) Graph summarising the textile fibres used for helmet padding according to archaeological findings (elaboration: authors).

Table 1: Finds analysed for the study of Roman helmet linings during the Imperial age (n. d. = not determined) (author's elaboration).

Place of provenance	Find	Chronology	Material	Morphology	Fixing system	Bibliography
Vindonissa (Switzerland)	Organic elements on Imperial Gallic Helmet B or C	Early 1st cent. AD	Felt	n. d.	n. d.	Deschler Erb, Fellmann Brogli, Kahlau 2004, 3–12
Vindonissa (Switzerland)	Cap	Early 1st cent. AD	Leather	n. d.	n. d.	Gansser–Burckhardt 1947–1948, 40–41
Vindonissa (Switzerland)	Cap	Early 1st cent. AD	Leather	n. d.	n. d.	Gansser–Burckhardt 1947–1948, 41–44
Hellange (Luxembourg)	Resinous substance on cavalry sport helmet type E face mask	2nd quarter 1st cent. AD	n. d.	n. d.	n. d.	Müller 1912, 42; Robinson 1975, 144
Hod Hill (UK)	Organic elements on cheek-piece of imperial-gallic F helmet	Mid 1st cent. AD	Linen?	n. d.	n. d.	Brailsford 1962, 5, B1
Newstead (UK)	Organic elements on Auxiliary cavalry type A helmet	3rd quarter 1st cent. AD	Wool	n. d.	Resinous glue	Curle 1911, 164; Robinson 1975, 144
Newstead (UK)	Organic elements on Cavalry sport helmet type C helmet	3rd quarter 1st cent. AD	Wool	n. d.	Resinous glue	Curle 1911, 170; Robinson 1975, 144
Newstead (UK)	Organic elements on Cavalry Sport helmet type B	3rd quarter 1st cent. AD	Leather	n. d.	n. d.	Curle 1911, 166–167; Robinson 1975, 144
Didymoi (Egypt)	Cap	Late 1st cent. AD	Wool; Linen	Calotte shape with cheek flaps	n. d.	Cardon, Granger–Taylor, Nowik 2011, 279–280
Didymoi (Egypt)	Cap	Late 1st cent. AD	Wool	Calotte shape	n. d.	Cardon, Granger–Taylor, Nowik 2011, 347–349
Mons Claudianus (Egypt)	Cap	Early 2nd cent. AD	Felt	Cylindrical shape	n. d.	Jørgensen 2018, fig. 7; Mannering 2006, 1110, MC 922
Mons Claudianus (Egypt)	Cap	Early 2nd cent. AD	Felt	Calotte shape with cheek flaps	n. d.	Jørgensen 2018, fig. 8
Mons Claudianus (Egypt)	Cap	Early 2nd cent. AD	Wool	Calotte shape	n. d.	Mannering 2006, p. 158, fig. 8. MC 548.
Dura Europos (Syria)	Cap	1st half 3rd cent. AD	Wool; Felt	Calotte shape with cheek flaps	n. d.	James 2004, 108–109
Dura Europos (Syria)	Rivets on the inner surface of a cheek-piece of an auxiliary cavalry D-E-F helmet	Late 2nd cent. AD-1st half of 3rd cent. AD	n. d.	n. d.	Rivets	James 1990, 132, pl. 2.1.G
Deurne (Netherlands)	Organic elements on a ridge helmet type Barkasovo	Early 4th cent. AD	Felt?	n. d.	n. d.	Driel-Murray 2000, 307

Place of provenance	Find	Chronology	Material	Morphology	Fixing system	Bibliography
Augst (Switzerland)	Stiching holes on a ridge helmet type Intercisa	4th cent. AD	n. d.	n. d.	Sewing	Bishop, Coulston 2006, 210, fig. 134, n. 3
Worms (Germany)	Stiching holes on a ridge helmet type Intercisa	4th cent. AD	n. d.	n. d.	Sewing (cheek-pieces?)	Bishop, Coulston 2006, 210, fig. 134, n. 4
Intercisa (Hungary)	Stiching holes on a ridge helmet type Intercisa	Late 4th cent. AD-early 5th cent. AD	n. d.	n. d.	Sewing (bowl?)	Bishop, Coulston 2006, 210, fig. 134, n. 2

materials on the external side of the bowl, attested on some cavalry helmets, such as the specimens from Kops Plateau at Nijmegen (Netherlands), had probably more than just an ornamental function. It may have also offered protection to the soldier from the sun and light blows.[68] Both wool and linen were used in one of the Didymoi specimens, while wool and felt were employed in the Dura Europos piece. Despite the scarcity of finds from which to draw general information, evidence suggests that, during the Early Imperial age (1st century AD), all fibres were used to make padding for helmets. From the 2nd century AD onwards, only felt and wool are documented. The absence of linen could either be a documentary gap or an actual preference for the other materials. During the Late Imperial age, the widespread use of *pileus pannonicus* may instead have contributed an increased reliance on felt. It is no coincidence that the textile remains found in the Deurne helmet appear to be made of felt.

Due to the analysis of the finds, the morphology of the padding systems was recognised and the parts of the helmet that needed lining were identified. For the 1st century AD, the only references are the Didymoi specimens. The first has a hemispherical shape, while the latter has the bowl and cheek-protections joined together in a single cap. The padded parts included the bowl and cheek-pieces. Indeed, this is confirmed by the Vindonissa helmet on which, however, it is impossible to determine whether the bowl and cheek-pieces were padded separately or as part of a single, unified lining.

In the 2nd century AD, at Mons Claudianus evidence of both a hat with integrated cheek parts and neck guard, as well as a simple hat are documented. In the latter case, the cheek-pieces were probably padded separately. This separate padding system is also found in the 3rd century AD, as demonstrated by the relief of Marcus Aurelius Alexys. However, as seen in the specimen from Dura Europos, one-piece hats with cheek parts were still present.

During the 4th century AD and the 5th century AD, the bowl was often padded using the *pileus pannonicus*. However, it cannot be ruled out that in some cases, as in the Augst helmet, the lining was made in a single piece sewn to the helmet. In the Late Imperial period, it became necessary to pad not only the bowl and the cheek-pieces, but also the neck guard, which became a movable element in contact with the soldier's neck.

The few indications regarding the attachment of the padding inside helmets are related to the presence of resinous glue: from the two helmets found in Newstead and from the Hellange mask. Both are dated to the 1st century AD and reflect an older tradition: traces of a resinous glue were found on an iron helmet of the pseudo-Attic type from a tomb in Kerch[69] dated to the mid-3rd century BC. This suggests that this method was likely known in the Greek world as well. In the 3rd century AD, an alternative method seems to have been used. This is demonstrated by the rivets inside the cheek-piece from Dura Europos, probably used to fix the padding. As a matter of fact, such rivets do not seem to have a function of connecting the cheek-piece with the bowl.

Finally, in the 4th century AD, there is clear evidence that the padding of the bowl could also not be attached to the helmet as the *pileus* was used for this purpose. It is also possible that some linings were sewn on, given the presence of numerous holes in some Intercisa type helmets. However, the use of glue to attach the padding to the cheek-pieces or neck guard had not been abandoned unless these components were sewn directly to the bowl piece.

[68] Van Enckevort and Willems 1994: 127.

[69] Schröder 1912: 317; Paddock 1993: 70.

Conclusions

In conclusion, despite the few available sources, the study has highlighted the diversity of helmet padding systems during the Imperial age. Such differences, as shown for instance at Mons Claudianus, are also found within the same chronological period and geographical region. It was possible to demonstrate that it was necessary to pad at least the bowl, the cheek-pieces and, in the Late Imperial age, also the neck guard for better absorption of blows and dissipation of force.

Even though felt and wool are more commonly attested, linen was also used. In addition, for economic reasons, many of these paddings were made from scraps of other fabrics, discarded and then reused.

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Textiles on the March: Textile Activities in Roman Republican Military Contexts of Western Iberia (1st Century BC)

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Abstract: In the absence of textual evidence comparable to that of the Imperial period, archaeological data constitute the key source to reconstruct textile supply to the Late Republican Roman armies. As the scenario of many of the main conflicts of the Late Republic, the Iberian Peninsula offers a particularly fertile ground to study that supply. However, studies on this topic remain rare. This contribution aims to offer a first overview of available evidence through a discussion of selected case studies from Western Iberia which relate to a particularly dynamic phase of the Roman military presence in the Far West – the 1st century BC. The selected case studies cover a range of different situations, all connected with the Roman army. These include formal military camps (e.g. Cáceres el Viejo), militarised indigenous settlements (e.g. Chibanes, Cabeça de Vaiamonte and Cáceres Viejo de Santa Marina), settlements founded *ex novo* with a strong military presence (e.g. Monte dos Castelinhos and Pedrão) and later small forts with a territorial control function (e.g. Castelo da Lousa). These case studies illustrate various facets of textile supply, production and procurement, from relatively significant 'in-house' production in military sites to an intensification of local production in militarised settlements and areas.

Keywords: Hispania Ulterior, loom weights, militarised settlements, military camps, military supply, Roman army, spindle whorls

Setting the stage: research on textiles and the Late Republican army in Iberia (or the lack thereof)

The Roman presence and military expansion in Iberia are a direct result of the Second Punic war which had in the Iberian Peninsula one of its main scenarios.[1] However, the landing of the forces commanded by Gnaeus Cornelius Scipio in Emporion in 218 BC was just the beginning of a long and drawn-out process marked by multiple military conflicts – not only against local groups, but also in the framework of Roman civil wars – which would not be completed until 19 BC with the Roman victory over the Cantabri and the Astures of Northern Iberia under Augustus.[2]

These 200 years of conflict make the Iberian Peninsula a truly unique laboratory through which to study the Roman army of the Late Republic, its equipment, its strategies, but also its approach to the supply of critical resources and materials.[3] These included, of course, the textiles used for garments, tents, for storage and transportation of goods, as well as for a host of other practical uses around military camps and encampments. This fact, however, is seldom acknowledged in the existing literature.

Despite the virtual absence of research on this topic until recently (see below), textile activities were undeniably a part of daily life in Roman military camps in the Iberian Peninsula. However, for the Roman Republican period at least, there is still a lack of detailed studies on textile crafts in military and militarised contexts. It should, however, be borne in mind that this was an indispensable activity for armies.[4]

This being said, and in the absence of textual and inscriptional evidence comparable to that available for later periods,[5] any reconstruction of the textile supply

[1] Knapp 1977; Edwell 2011.
[2] For syntheses on this long process, see contributions in Morillo Cerdán *et al.* 2003; Morillo Cerdán and Aurrecoechea 2006; Morillo Cerdán 2016 and 2024; Morillo Cerdán and Sala-Sellés 2019; Pereira *et al.* 2021; see also Heras Mora 2018.
[3] Erdkamp 2010.
[4] Polyb. 6.39.15.
[5] Droß-Krüpe 2011 and 2012; Liu 2012.

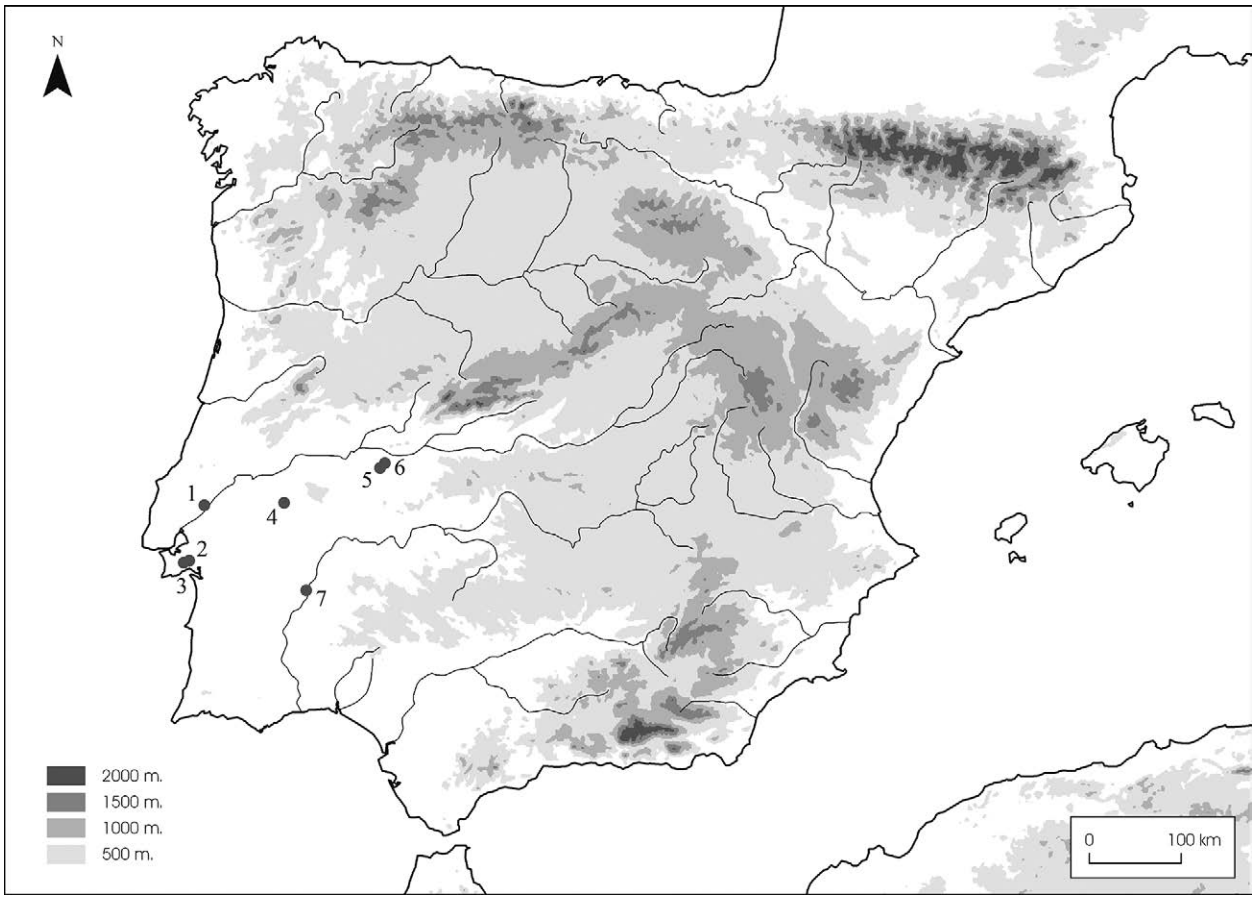

Figure 1: Location of the sites discussed in the text in the Iberian Peninsula: 1 – Monte dos Castelinhos (Vila Franca de Xira); 2 – Chibanes (Palmela); 3 – Pedrão (Palmela); 4 – Cabeça de Vaiamonte (Monforte); 5 – Cáceres el Viejo (Cáceres); 6 – Cáceres Viejo de Santa Marina (Casas de Milán); 7 – Castelo da Lousa (Moura) (cartographic base: Trabajos de Prehistoria/CSIC).

chains serving the Roman armies in the West is difficult, not to say impossible. However, this contribution aims to highlight that there is strong evidence that, at this time, the needs related to textile products were not met just by long-distance supply chains. This paper in fact provides an overview of military and militarised contexts in Western Iberia dated to the 1st century BC – a particularly complex period in the history of the Roman military presence in this area – which have yielded more or less substantial evidence of textile production (Figure 1).

As will be discussed below, there are good reasons to believe that some military enclosures, especially those that housed the army for longer periods, enjoyed local or regional supplies. This, in turn, raises new questions about the social and economic relations between textile producers and the army and the impact of the presence of military contingents on local/regional textile production. These questions will be outlined in more detail in the conclusions, but before a discussion of the aforementioned case studies is in order.

Textile activities in Roman Republican military contexts of Western Iberia

Monte dos Castelinhos (Vila Franca de Xira, PT)

The itinerary proposed in this contribution starts in the Lower Tagus valley, an area that was incorporated into the Roman sphere fairly early and in which recent research has brought to the fore substantial evidence of an early presence of the Roman army.[6] A particularly good example is the site of Monte dos Castelinhos, in Vila Franca de Xira, which occupies a large hilltop area overlooking the Tagus and the Rio Grande da Pipa[7] (Figure 2). Its unusual and strategic position in the landscape, controlling a natural border area, led to the *ex-novo* foundation of a settlement during the Roman conquest, which may be identified with ancient Ierabriga.[8]

[6] See contributions in Fabião and Pimenta 2014; Pimenta 2022 and 2024.
[7] Pimenta 2013; 2015; 2024; Pimenta and Mendes 2022.
[8] Pimenta 2015; 2024: 688-696.

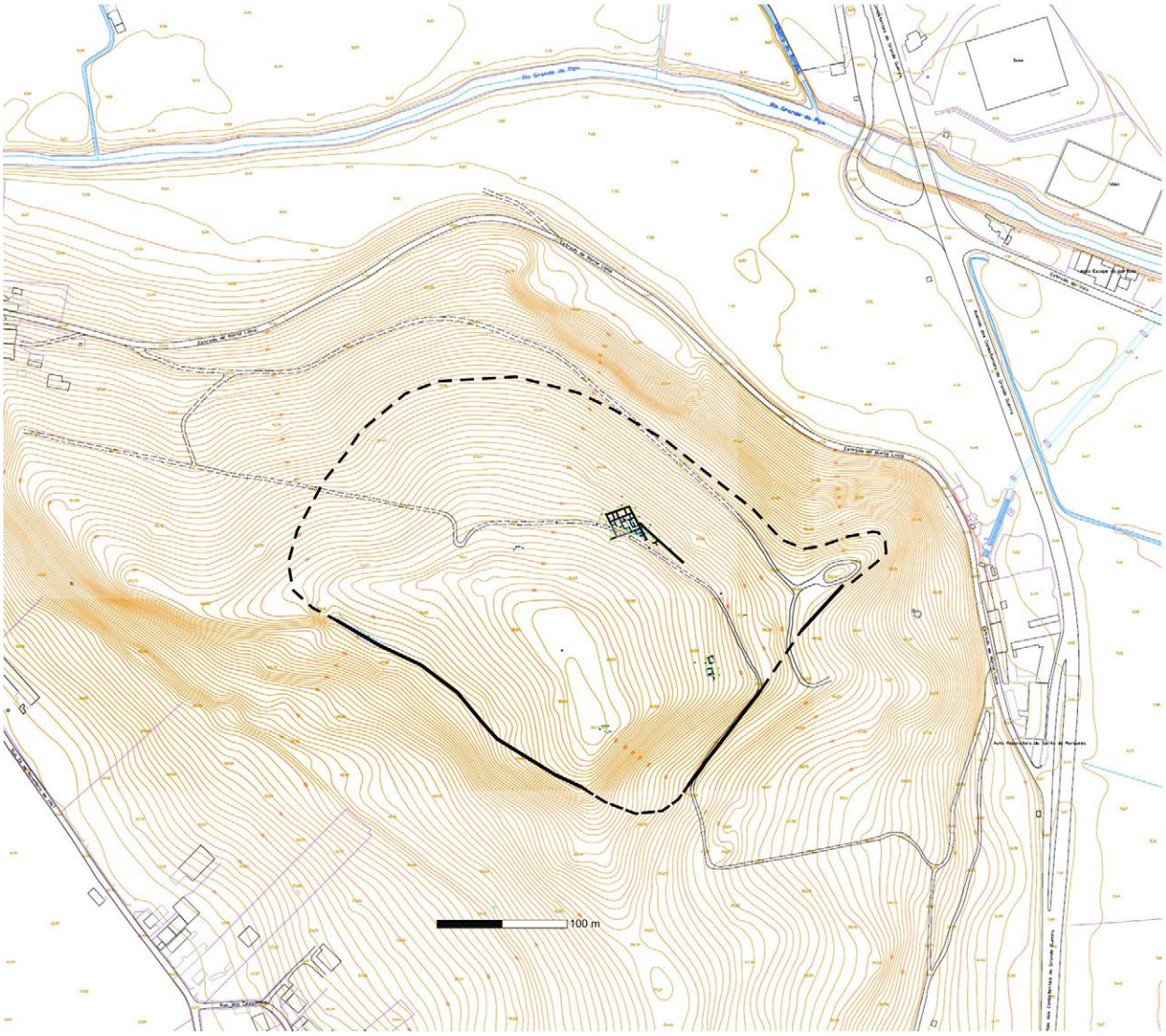

Figure 2: Topography of the Monte dos Castelinhos settlement and position of the excavated area and structures (drawing: after Pimenta 2024).

The relative abundance of loom weights and, to a lesser extent, of spindle whorls is a testament to a thriving textile activity in Monte dos Castelinhos.[9] The widespread distribution of this material by the architectural complexes thus far documented points to a domestic production for self-consumption, as we shall see.

The loom weight assemblage from Monte dos Castelinhos (Figures 3-4) includes 177 pieces retrieved in Roman Republican contexts,[10] although it is worth highlighting that weights and textile tools are also attested in Augustan contexts, further stressing the importance of this craft activity in the settlement.[11]

These loom weights are distributed by the two main Roman Republican phases of the site. 44 examples belong to the site's earliest phase (*c.* 70-50 BC), which so far has only been documented in a restricted area. All these pieces were retrieved together in Compartment B, fallen on a pavement, and most likely indicate the presence of a loom in this space.[12]

The levels attributed to the second Roman Republican phase (*c.* 50-30 BC), which have been more extensively documented, yielded the remaining 133 examples. These are distributed throughout the various spaces that make up the architectural complexes excavated on the site.[13] It is interesting to note their spatial distribution, as some concentrations in specific

[9] Pimenta 2024: 402-417.
[10] Pimenta 2024: 406-417; see also Santos 2015.
[11] Pimenta 2024: 407.
[12] Pimenta 2024: 408.
[13] Santos 2015: figs. 4-5; Pimenta 2024: 408.

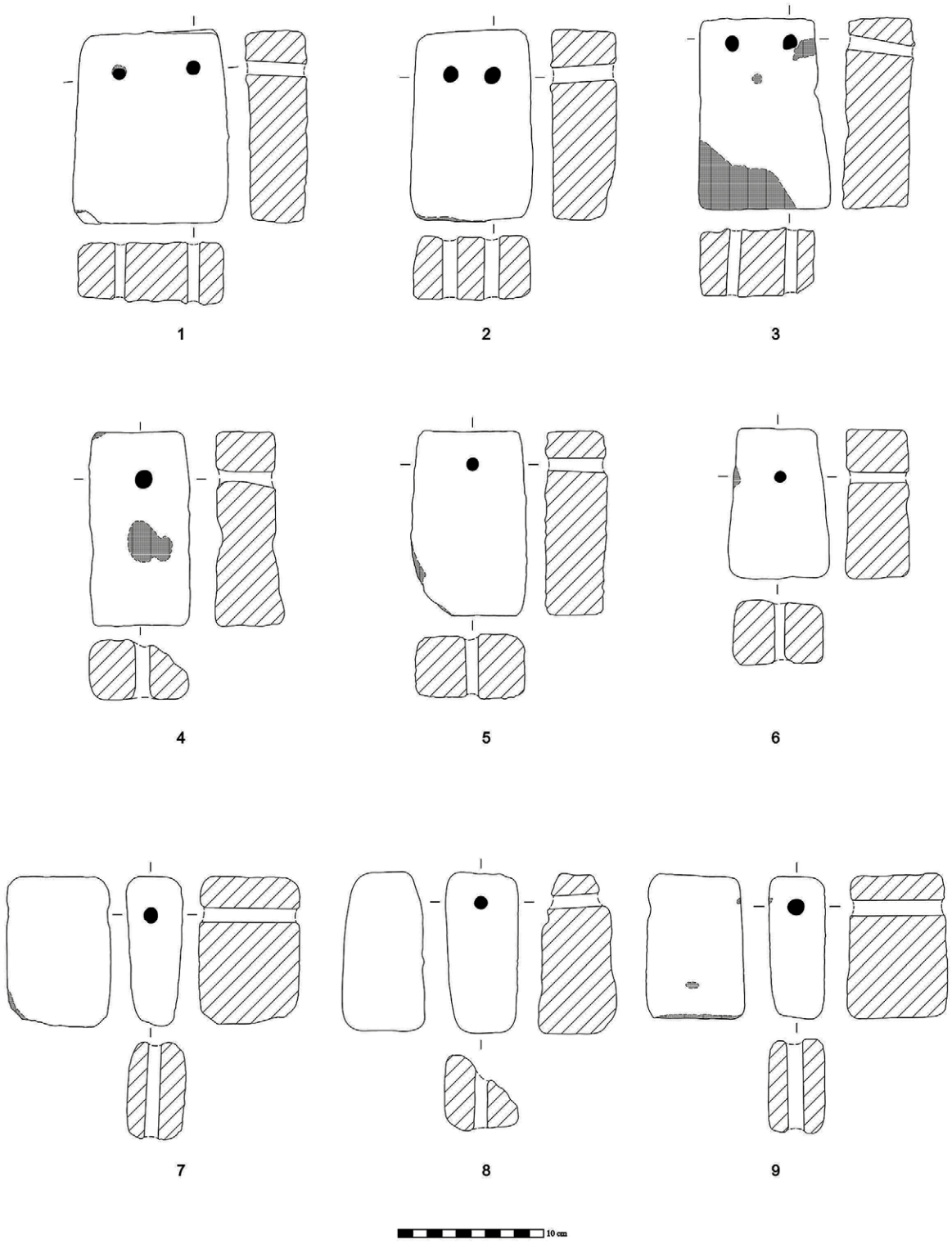

Figure 3: Examples of loom weights retrieved during the excavations in Monte dos Castelinhos (1) (drawing: after Pimenta 2024).

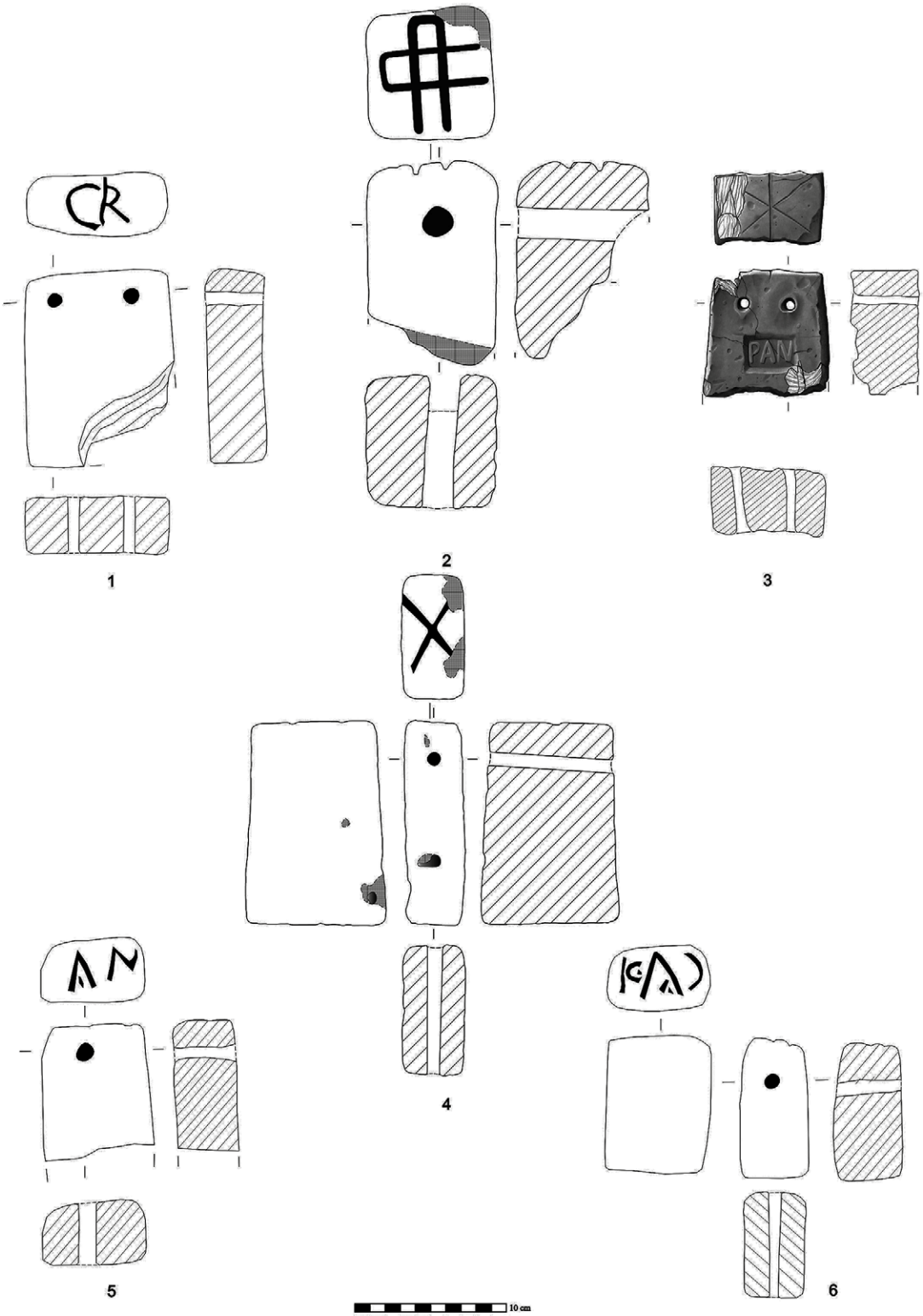

Figure 4: Examples of loom weights retrieved during the excavations in Monte dos Castelinhos (2) (drawing: after Pimenta 2024).

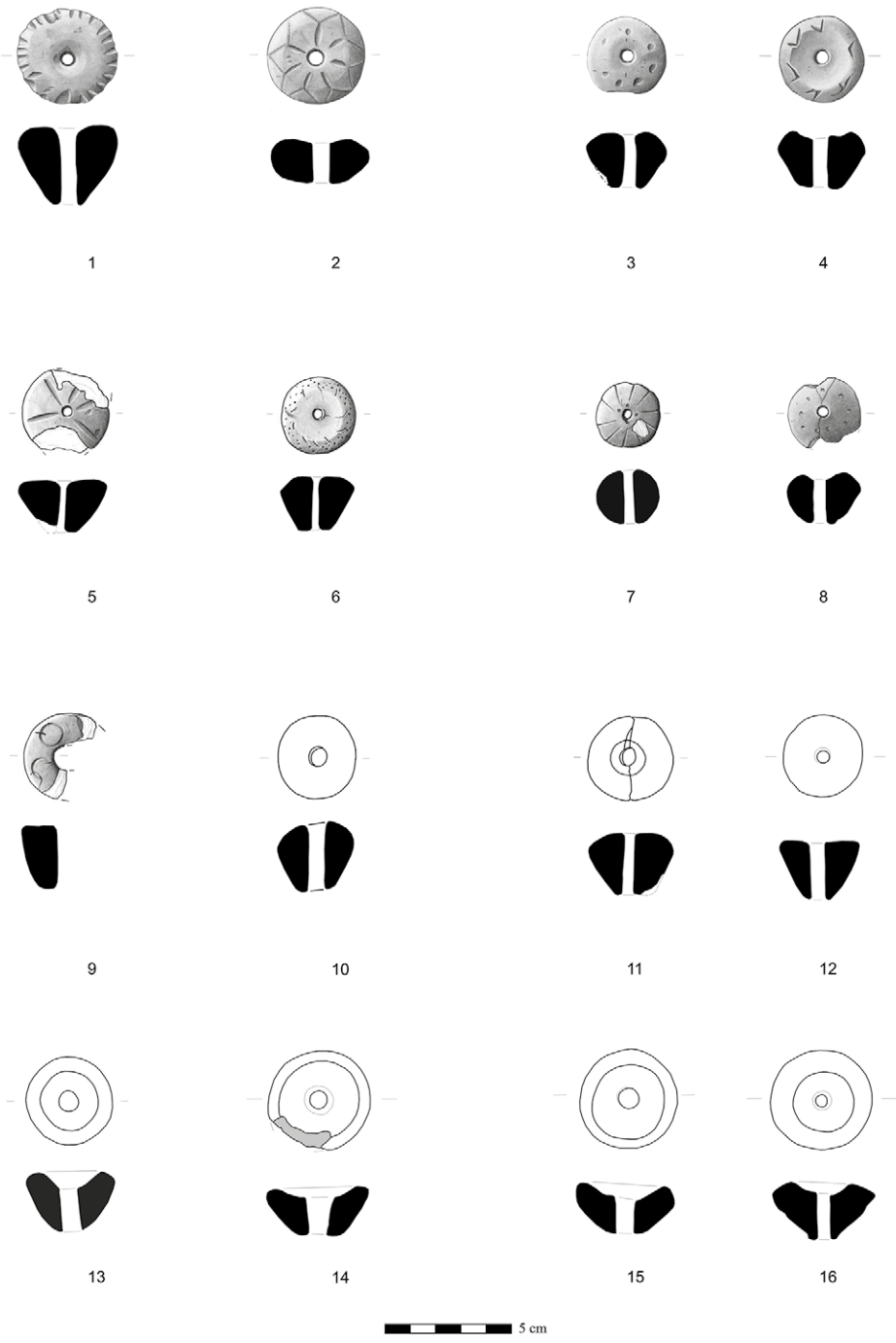

Figure 5: Examples of spindle whorls retrieved during the excavations in Monte dos Castelinhos (drawing: after Pimenta 2024).

areas can be observed, and can offer insights into the functionality of some of the architectural structures documented in the site. In other cases, however, loom weights seem to have been reused as construction material during this phase.[14]

Typologically, the best-represented group of loom weights includes parallelepipedal pieces with two perforations, followed by the ones with just one perforation and the ones with a transversal perforation; the rarest type includes large weights of truncated pyramidal shape.[15] Beyond their use as textile tools, it is also interesting to note that these weights served on occasion as epigraphic supports, offering insights into the literacy and writing practices of the local groups and even into the organization of textile production.[16]

[14] Pimenta 2024: 408.

[15] Pimenta 2024: 408, fig. 99 and Gráfico 38.

[16] Pimenta 2024: 409.

Spindle whorls are less common in Monte dos Castelinhos, amounting to a total of 26 pieces[17] (Figure 5). They are very regular and symmetrical and seem therefore to have been wheel-made or mould-made.[18] This being said, their physical structure points to a certain productive heterogeneity.[19] The morphology of these pieces is also variable, but there is a clear predominance of conical and biconical shapes.[20] It is also worth noting that a little more than one third of these spindle whorls were decorated.[21]

In light of these characteristics, it can be said that the spindle whorls from Monte dos Castelinhos derive from productive traditions with indigenous roots, as they have good parallels in Protohistoric contexts.[22] Therefore, it could be said that these spindle whorls follow a local tradition. It should nonetheless be mentioned that this type of pieces is present even in contexts related to the earlier phases of the Roman conquest in which an Italic component is strongly represented, such as Lisbon.[23]

The presence of substantial textile activities in Monte dos Castelinhos is an interesting element for understanding the economy of the site, but also for approaching its significance as a settlement or a military establishment. The need for any newly founded establishment to be self-sufficient and to take advantage of its surroundings was only natural. The ample distribution of spindle whorls and loom weights throughout the architectural assemblages excavated in different areas of the site suggest that here textile production was a domestic affair geared towards self-sufficiency,[24] which does not mean it was not a relevant economic activity for the site and its inhabitants.

Castro de Chibanes and Pedrão (Palmela, PT)

To the south of the Tagus estuary, in the Setúbal Peninsula, two archaeological sites excavated and published by Joaquina Soares and Carlos Tavares da Silva can be related to the first Roman occupation of the region. One of these sites, Chibanes, has been associated with the ancient Caepiana mentioned by Ptolemy in connection with the final events of the Lusitanian Wars.[25] Chibanes has a military or militarised Roman Republican occupation, with two distinct phases: one from the early 2nd to the early 1st century BC,[26] probably related to the Lusitanian Wars; and another dated between 75 and 40 BC which may be related to the Sertorian War and Ceasar's Civil War. The location of the site, with a wide visual domain over the basins of the Tagus and Sado rivers, must have been a decisive factor for the Roman military presence.[27]

The recently published study of the textile tools retrieved in Chibanes includes an assemblage of 100 spindle whorls, three loom weights, six copper alloy needles, a bone spindle shaft and three scissors, possibly shearing scissors.[28]

The spindle whorls of Chibanes are made of clay and were mostly modelled by hand, although a substantial number could also have been mould-made; only two were wheel-made. Asymmetrical biconical pieces are predominant in the assemblage, as is also the case in other contemporary sites. Most pieces are comparatively light (especially in the 20-25 g and the 15-20 g ranges), suggesting the production of medium-thickness threads. More than a third of the pieces were decorated, mostly pre-firing, and sport motifs which are common to other contemporary sites. The presence of pieces decorated with the imprints of metal needles[29] is particularly interesting, as it not only suggests that the users of these implements took part in the production of spindle whorls, but also ties together the different steps of textile production.

Loom weights, on the other hand, have a much smaller quantitative expression, with just three parallelepipedal examples. Two of them have the same morphology and share similar decorative motifs, with good parallels in other Roman Republican contexts. All of these pieces weigh over 1 kg and show use marks.[30] These finds were concentrated in the western area of the fort and belong to the first phase of the Roman Republican occupation. Chibanes also yielded a total of six copper alloy needles, with varying eye sizes which could be related to uses with different qualities of thread and fabric.[31]

It can thus be said that in Chibanes, a site connected with the northward movement of the Roman armies, textile activities are documented in the domestic environment of the western residential area of the hillfort.[32] The presence of women in this area, to which textile activities can most likely be associated, is particularly notorious in the case of Building C, where three spindle whorls were retrieved in an area in which a child burial was also documented.[33] It seems clear

[17] Pimenta 2024: 402-406, ests. 118-119.
[18] Pimenta 2024: 402.
[19] Pimenta 2024: 402.
[20] Pimenta 2024: 402, Gráfico 37.
[21] Pimenta 2024: 402-403, est. 118.
[22] As a comparison, see for example the material from Porto Sabugueiro, Salvaterra de Magos - Pereira 2016/2017.
[23] Pimenta *et al.* 2014: 722.
[24] Pimenta 2024: 416-417.
[25] Guerra 2004.
[26] Tavares da Silva *et al.* 2021: 44.
[27] Soares and Tavares da Silva 2021: 17.
[28] Pereira *et al.* 2021.
[29] Pereira *et al.* 2021: 283, fig. 3.9.
[30] Pereira *et al.* 2021: 288, fig. 6.
[31] Pereira *et al.* 2021: 288-289, fig. 8; Pereira 2021: 332.
[32] Pereira *et al.* 2021: 290.
[33] Soares and Duarte 2021.

Figure 6: Aerial view of the settlement of Cabeça de Vaiamonte (photograph: after Pereira 2018).

that women continued to carry out their domestic functions and they may also have assisted the army with obtaining and maintaining fabrics and garments.

Close to Chibanes, the hillfort of Pedrão was excavated, studied and published by the same team.[34] The layout of this settlement is quite different, but the Italic-type material retrieved here, dated between 125 and 85 BC, also suggests a military function and a connection to nearby Chibanes as part of an axis ensuring territorial control over the Sado Valley during the Lusitanian and Sertorian Wars. Here again, textile tools can be found in an eminently military establishment, including a dozen spindle whorls, some of which are decorated, and a needle found in a fireplace.[35]

Cabeça de Vaiamonte (Monforte, PT)

From the Atlantic coast, an important axis of territorial penetration by the Roman army to the interior of the Peninsula can be traced, which includes some of the most important scenarios of the second- and first-century BC conflicts. The cases of Cabeça de Vaiamonte[36] and Cáceres el Viejo (see below) can be presented in this context as examples of the Roman Republican occupations further to the interior of the Iberian Peninsula. In the former, the Italic contingents occupied a pre-existing settlement, while the latter corresponds to a canonical Roman military camp. Due to their proximity, contemporaneity and obvious similarities in material culture, it seems important to analyse the presence of textile tools in these two different environments.

Cabeça de Vaiamonte (Figure 6) was an indigenous settlement occupying an isolated hillock controlling the landscape between the Sorraia/Tagus and the Caia/Guadiana valleys. The assemblage retrieved during the excavations in this site in the 1950s and 1960s is particularly important since it illustrates nearly all the stages of the textile *chaîne opératoire*, from the practice of husbandry and the shearing and carding of wool, to spinning, weaving and sewing.[37]

The assemblage of spindle whorls from Vaiamonte (Figure 7), in particular, is remarkable in many ways, not least of which is the sheer number of individual pieces retrieved in the site, which ascends to a staggering 1660 pieces.[38] This is by far the largest assemblage thus far studied in the Iberian Peninsula. They also show a significant typological and decorative diversity, although biconical pieces are the most abundant.

[34] Soares and Tavares da Silva 1973; Tavares da Silva *et al.* 1973.
[35] Soares and Tavares da Silva 1973: 30.
[36] Fabião 1998; Pereira 2018.
[37] Pereira 2018: 265.
[38] Pereira 2013.

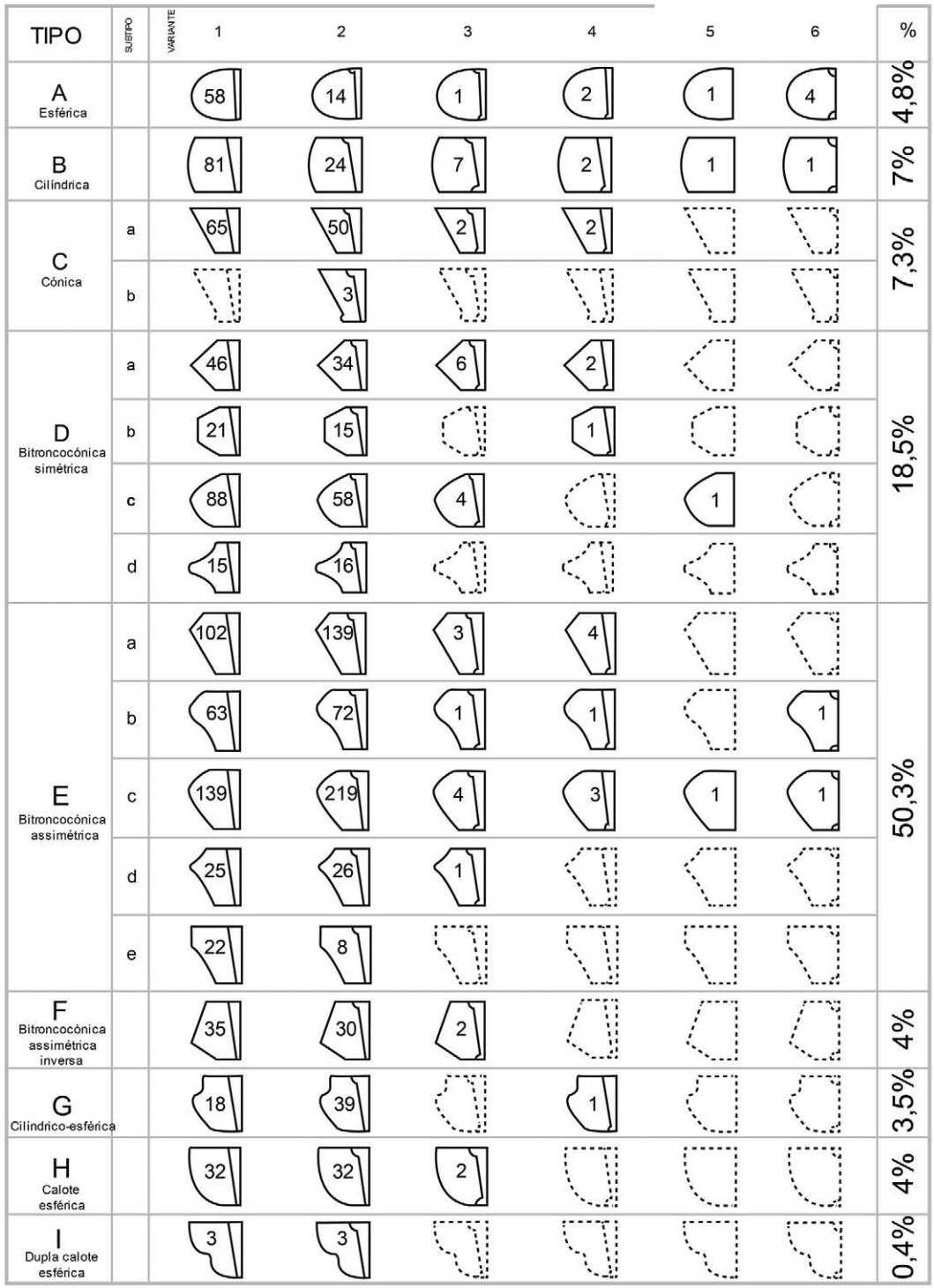

Figure 7: Typology and quantification of the spindle whorls retrieved in Cabeça de Vaiamonte (drawing: after Pereira 2013).

Apart from its sheer volume, the spindle whorl assemblage from Vaiamonte is also notable due to the high percentage of decorated pieces, which amounts to 43% of the total. Of particular interest are the numerous spindle whorls bearing apparent graffiti and, in some cases, what appear to be inscriptions, or pseudo-inscriptions, apparently in different Pre-Roman writing systems used in Iberia.[39]

There is also a representative group comprising 25 individual loom weights, the morphology of which

[39] Pereira 2013: 683-684.

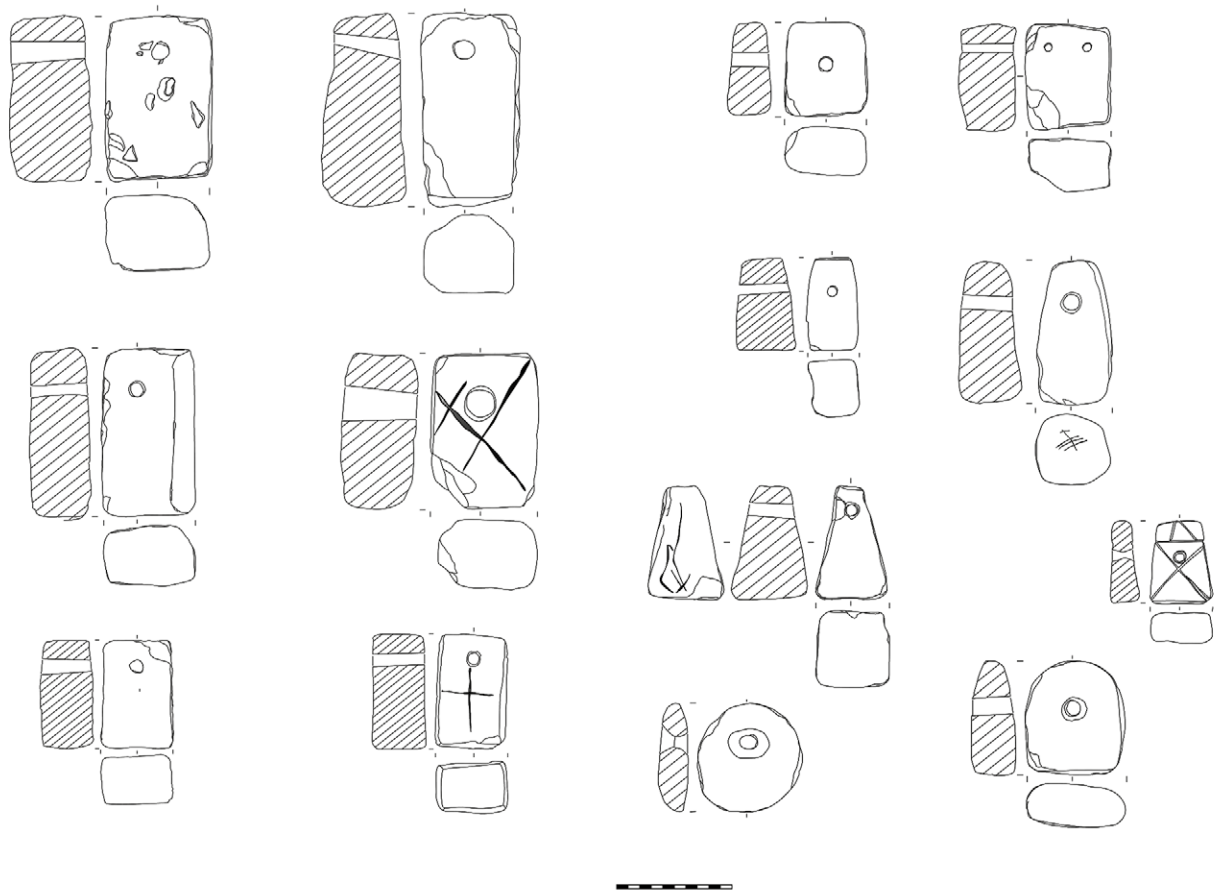

Figure 8: Examples of loom weights retrieved in Cabeça de Vaiamonte (drawing: T.R. Pereira).

covers a series of characteristic typological groups (Figure 8). The most representative type includes flat rectangular examples, which account for 68% of the total, but flat quadrangular, pyramidal truncated and discoidal types are also represented.[40]

Unfortunately, the site was excavated at an early date and the stratigraphic contexts of these materials are now lost. However, it could cautiously be suggested that the spindle whorl assemblage could reflect a relatively long diachrony of use. The function of these textile tools, and especially the spindle whorls, in this site remains unclear. The sheer scale of the assemblage stands out in the regional – and, in fact, in the overall Iberian – panorama and is difficult to explain purely on productive terms. While the presence of textile activities in Vaiamonte seems undeniable, as it is also attested by the presence of a carding comb and 75 needles/awls,[41] the scale of production suggested by the number of tools – especially spinning tools – seems quite displaced in the available panorama.

Furthermore, several aspects of the assemblage – such as the abundance of decorations, and especially of inscribed pieces, and the presence of pieces that seem not to serve a strictly functional purpose (e.g. spindle whorls with incomplete and decentred perforations) – could point towards a ritual function, perhaps as *ex-votos* in the framework of a sanctuary or a votive deposit. Therefore, it seems at least plausible that this assemblage relates, at least in part, to a specific type of ritual practice rooted in the regional Late Iron Age, in which textile tools played a significant role, perhaps in connection with the specific nature of the worshipped divinity. It seems likely, however, that these ritual practices intensified during the Roman Republican period, perhaps as a result of their adoption by indigenous *auxilia* from other parts of the Iberian Peninsula stationed in Vaiamonte with the Roman army, as suggested by the apparently mixed nature of the inscriptions documented in the spindle whorls.

Finally, as a side note to the consideration of this site, it is worth mentioning that other instances of textile activities taking place in militarised indigenous settlements during the Late Republic may exist at the

[40] Pereira 2018: 265.
[41] Pereira 2018: 268-271.

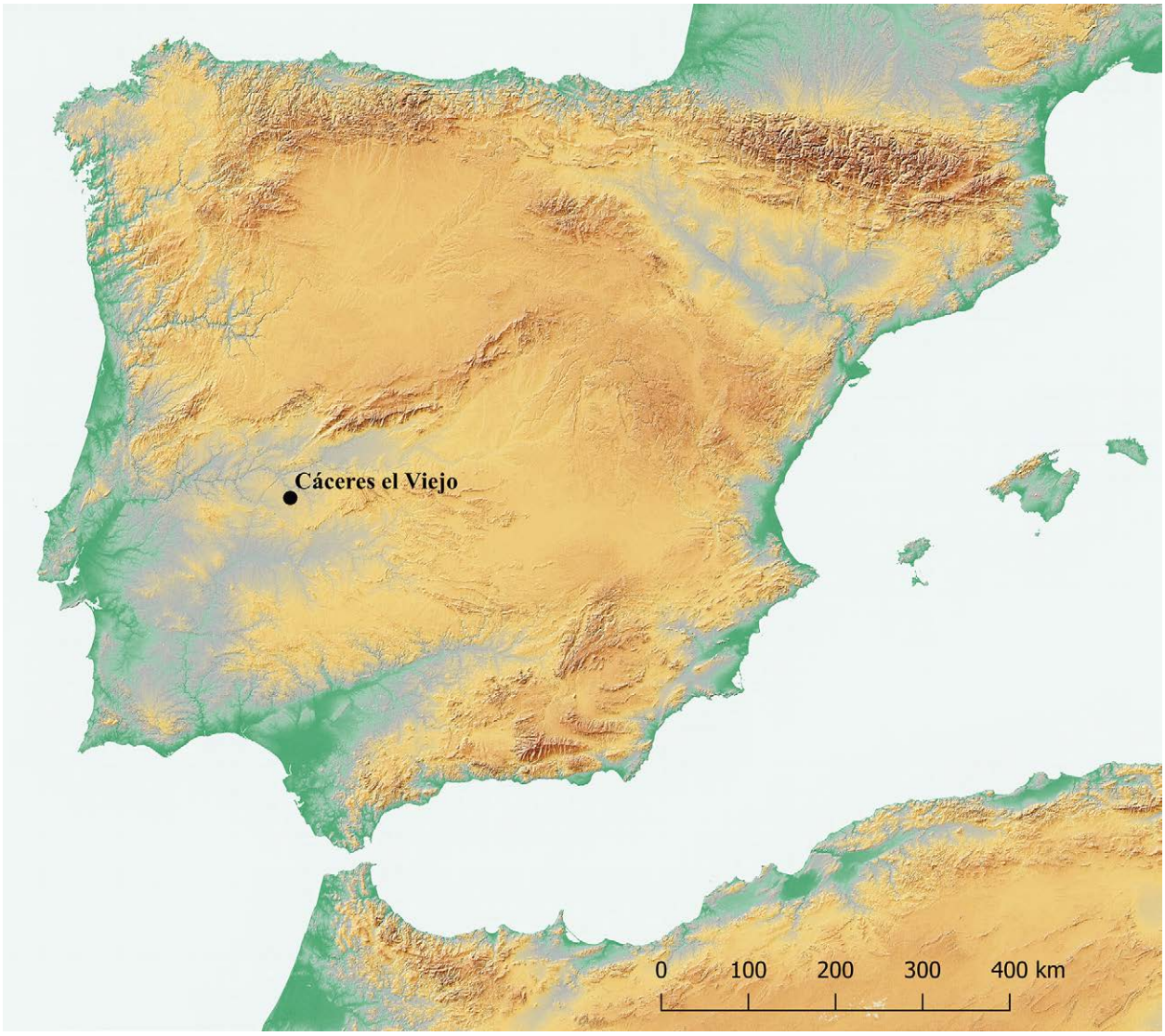

Figure 9: Location of the military camp of Cáceres el Viejo in the Iberian Peninsula (cartographic base: WMS map of the UAM Cartography Services).

regional level. This appears to be the case of Castelo Velho de Veiros (Estremoz), which seems to have known a significant Roman military presence in the 1st century BC.[42] Unfortunately, the documentation available for this site is limited, as only a small area has been properly excavated. However, the presence of a loom weight in Late Republican levels which have also yielded *militaria* is worth noting here.[43]

Cáceres el Viejo (Cáceres, ES)

The Late Roman Republican military camp of Cáceres el Viejo, in Spanish Extremadura (Figure 9), is located between the Sierra San Pedro and the Tagus River, a short distance to the northeast of the city of Cáceres.

The site is located close to the so-called Vía de la Plata, the main communication route between the south and the north of the Iberian Peninsula. It dates to the first quarter of the 1st century BC and was excavated in the early 20th century by Adolf Schulten and Rudolf Paulsen.[44] Later, Günter Ulbert[45] studied most of the archaeological material retrieved in the Roman camp.

This is a paradigmatic site (Figure 10) for the study of the Roman military settlements of the first quarter of the 1st century BC, and for this reason, summary descriptions with some very specific considerations on the camp can also be found in general bibliography on Roman camps.[46]

[42] Arnaud 1970; for the military nature of the site, see also Fabião 1998: 238; Mataloto and Roque 2012.
[43] Arnaud: 1970, fig. III.
[44] Schulten 1928; 1930; 1932.
[45] Ulbert 1984.
[46] Morillo Cerdán 1991: 155-158; 2003: 58-59; Pamment Salvatore 1996: 131-134; Hanel 2006: 224-227; Heras Mora 2018: 129-144.

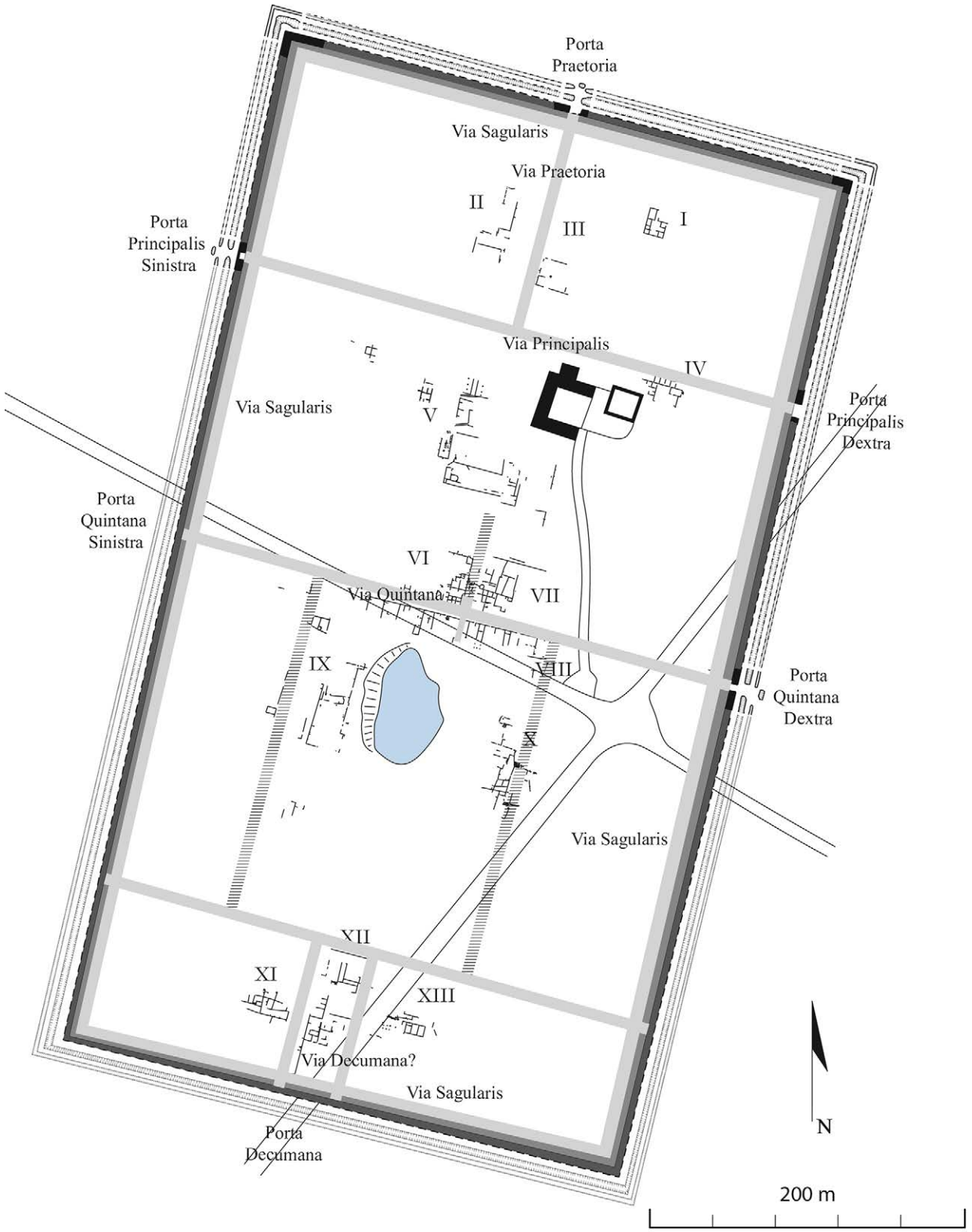

Figure 10: Ideal reconstruction of the street layout of the camp from the data of archaeological excavations, with indications of the buildings and gates (drawing: C. Pereira and A. Morillo).

Despite this fact, today it is difficult to reconstruct the stratigraphy and the archaeological contexts of the excavated portions of this site.[47] This hinders the recognition of evidence related to textile production or maintenance. Nonetheless, this settlement was recently restudied by a large team of researchers with different specialties. This work resulted in a large monograph on the whole collection.[48] This new approach to the legionary camp affords some new insights into this kind of activity, that were certainly taking place inside the military enclosure.

Besides, there is strong evidence that the camp of Cáceres el Viejo established relations with the civilian settlements in its surroundings, ensuring dependence or loyalty to the Roman army settled there. Apart from the evidence from the camp itself, these relations can also be tracked in the archaeological record of some civilian settlements, such as Villasviejas del Tamuja[49] or Cabeça de Vaiamonte,[50] for which the presence of military units has been posited.

It is unlikely that the Roman army relied only on regular state supplies or local suppliers exclusively, as there are clear indicators that textile production was also taking place at these military sites. Cáceres el Viejo is not an exception, as it has yielded evidence not only for the production but also for the maintenance of fabrics adapted to the performance of military functions. Textile-related tools from the site include 16 spindle whorls, 78 *pondera* (Figure 11), four needles and nine scissors.[51]

The characteristics of this assemblage seem to point to the prevalence of wool as the main textile fibre. This is due not only to the presence of scissors, most likely sheering scissors, but also to the technical and morphological characteristics of the assemblage of clay spindle whorls and weights. These would have been well-adapted to the optimised processing of that animal fibre. The features of the needles documented on the site, namely their eyes, suggest a widespread use of medium-thickness threads. Only one bone spindle whorl was identified, which could be related to the spinning of a finer thread, although it cannot be excluded that this piece was part of a rattle. Also noteworthy is the presence of four spindle whorls with a weight close to the Roman *uncia* (*c.* 27 g), one of which has an incised cross that can be related to that Roman unit. This motif is repeated in the set of *pondera*, in which other incised and printed motifs also appear.

Unfortunately, as mentioned above, the context in which these elements were recovered within the military enclosure cannot be reconstructed. However, some comments can be made on their probable provenance and how they may be indicative of contexts of textile production or maintenance. The testimonies of Schulten and Paulsen, as well as the data provided by Günter Ulbert who re-examined the original excavations in the 1980s, provide some relevant information on possible concentrations of elements that may be related to these activities.

Concentrations of loom weights in buildings VI and XI stand out,[52] and they may indicate that textiles were produced at these locations within the camp. Furthermore, it is known that part of the buildings of the forum were occupied by metallurgical workshops (e.g. Building X), so it is not surprising to find other craft activities in this area, namely in Building VI, north of the *Via Quintana.* In the case of building XI, it is difficult to establish a specific function, but it may also have been related to textile activities. Unfortunately, the provenance of the remaining textile tools is unclear, as they were smaller in size and did not receive specific attention in excavation reports.

On the other hand, the aforementioned restudy of the site yielded some innovative insights regarding the analysis of some internal structures of the military camp.[53] The forum (Buildings VIII, XI and X, Figure 10) is located south of the *Via Quintana* and in a central position in relation to the longitudinal axis of the camp. Apart from the building that has been defined as a 'temple',[54] no detailed descriptions are available for the buildings that surround this open area of 133 m on one of its sides. However, as stated above, the identification of some artefacts that have been recovered in these areas makes it possible to infer that these spaces around the forum corresponded to *tabernae* and *fabricae* dedicated, at least in part, to metallurgical and textile tasks.

Cáceres Viejo de Santa Marina (Casas de Millán, ES)

Cáceres Viejo de Santa Marina, another settlement with a probable military function, is located near the Roman camp of Cáceres el Viejo (Figure 12) and is possibly contemporaneous with its occupation. The existence of the site was first reported by Publio Hurtado.[55] Fernando García Morales further discussed this site and its interpretation, linking it with the Roman camp of Cáceres el Viejo and assuming that it was an advanced post of that military establishment. [56]

[47] Pereira and Morillo Cerdán 2025.
[48] Pereira and Morillo Cerdán 2025.
[49] Hernández Hernández *et al.* 1989; Hernández Hernández and Martín Bravo 2021; Mayoral *et al.* 2021; Mayoral 2021.
[50] Fabião 1998; Pereira 2018.
[51] Pereira 2025.
[52] Ulbert 1984: 46.
[53] Morillo Cerdán 2025.
[54] Schulten 1928: 7-8, fig. 4.
[55] Hurtado Pérez 1927.
[56] García Morales 1979.

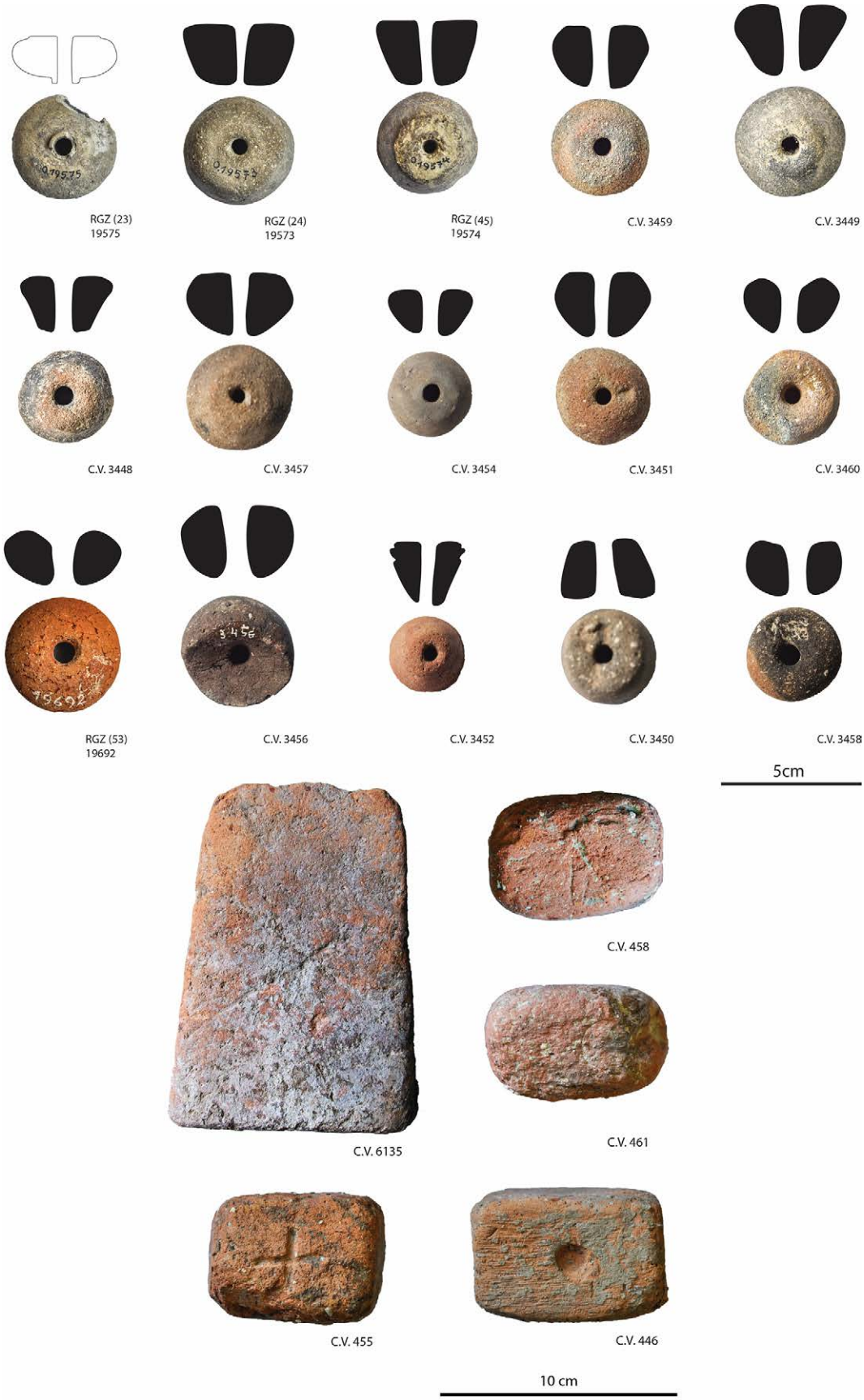

Figure 11: Some spindle whorls and decorated loom weights from Cáceres el Viejo, Spain.

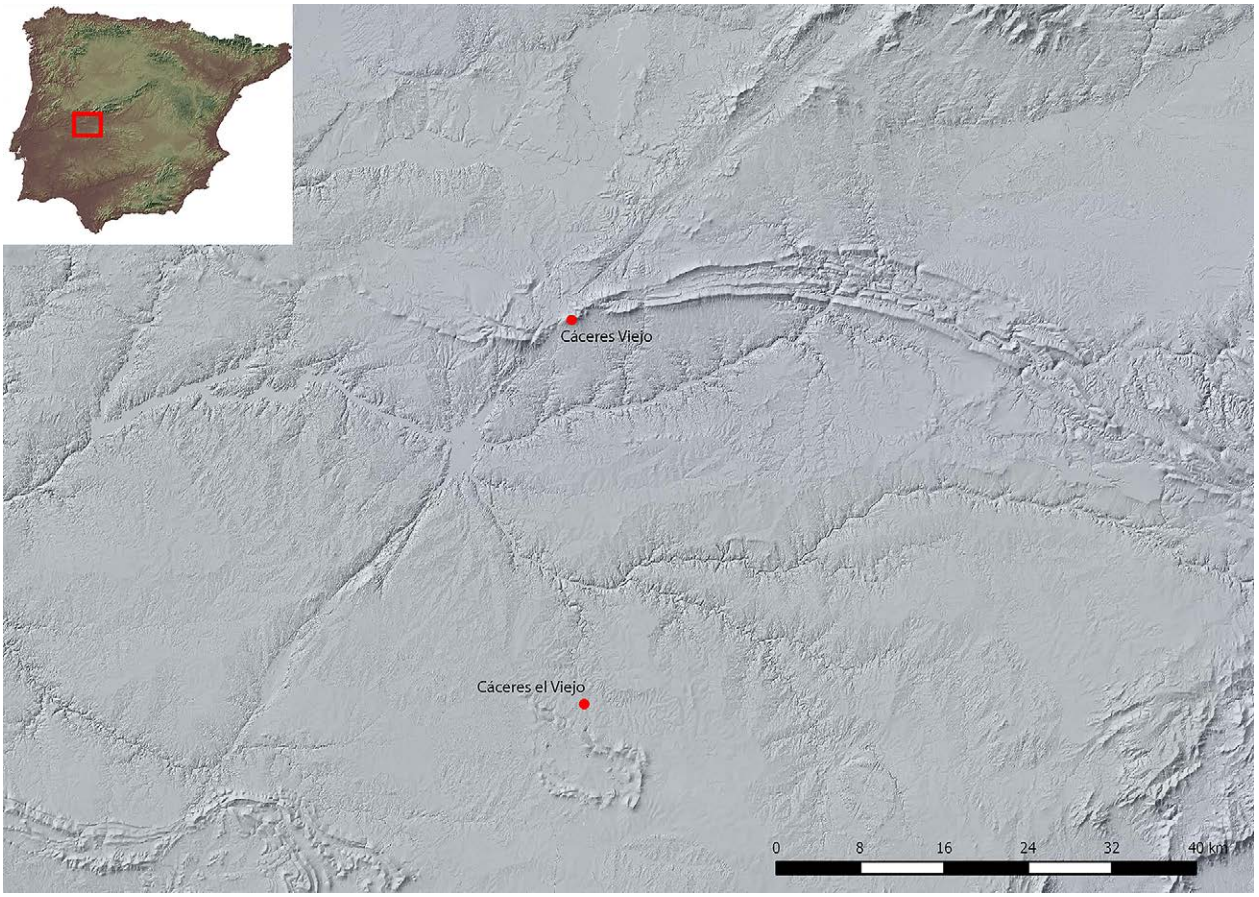

Figure 12: Location of Cáceres Viejo (Casas de Millán) and Cáceres el Viejo (Cáceres) (drawing: after Pereira 2017: fig. 11).

Knowledge about Cáceres Viejo de Santa Marina has not increased significantly since the work of Publio Hurtado, as research has been limited to reproducing what was said in the 1920s. However, recent excavations at the settlement have shown that its characteristics are very different from those of Cáceres el Viejo as far as location, architecture (Figure 13) and material culture are concerned.[57] This is a high-altitude settlement located on the slopes of a high-rising hill and its material culture strongly differs from that of Cáceres el Viejo. While the latter shows an evident affinity with the Italic world and with the senatorial army, Cáceres Viejo de Santa Marina shows ties with the Spanish Meseta.[58]

The architecture is also quite different, as it is simpler, with well-defined spaces implanted on platforms created for this purpose.[59] Buildings with private spaces have been recorded, with fireplaces and possible benches or racks, in one of which a storage area was documented.

These differences also extend to the record for textile activities. The aforementioned room with the storage area yielded the only textile-related finds from the site, specifically four spindle-whorls.[60] Contrary to what was recorded in Cáceres el Viejo, here no specialization and no possible workshops can be observed. In this site, textile activities were a sporadic craft taking place in common spaces together with other daily activities, as these spindle whorls were found together with a set of seven *glandes plumbeae*, three stone bullets, a circular hand millstone (*catillus*), two knives and several ceramic vessels.[61]

It can therefore be said that, while both settlements are related to a military presence, they are in fact in juxtaposed contexts. This apposition, however, is not limited to the implantation strategy, the architecture, or the relationship with the territory and the local communities. It is also evident in daily contexts and the activities practiced in each site: in one, a clear specialisation in the production and maintenance of textiles can be observed, while in the other, textile activities were more sporadic, perhaps answering

[57] Pereira 2017; Pereira and Dias 2020.
[58] Pereira and Dias 2020: 122.
[59] Pereira 2021.
[60] Pereira and Dias 2020: 111, fig. 8.
[61] Pereira and Dias 2020.

Figure 13: Plan of the structures identified in Cáceres Viejo (drawing and photograph: after Pereira and Dias 2020: fig. 3) with the location of the findspot of the spindle whorls.

specific needs as they emerged. This distinction is also evident in the quality and nature of the raw materials used to produce spindle whorls.

Castelo da Lousa (Mourão, PT)

The last case study considered in this contribution is that of the military establishment of Castelo da Lousa.[62] Associated with a later period than the previous sites, in the mid-to-late 1st century BC, this architectural complex seems to have been intended for military and territorial control. It has also yielded an assemblage of 82 spindle whorls, of which 35 were decorated (Figure 14), as well as 110 *pondera* of different weights and morphologies (Figure 15).[63]

The case of Castelo da Lousa shows that even in a comparatively late defensive structure with particular characteristics the domestic economies, probably carried out by local inhabitants and not by Italic military contingents, continued to be indispensable to the daily activities in military or militarised contexts. In a context connected not so much with military advances but with the consolidation of territorial control and administration, textile production remained a key aspect of the productive activities associated with the daily life in military establishments.

Furthermore, and as an epilogue to the panorama presented in the preceding pages, it is worth pointing out that this association between textile activities and military or militarised contexts can still be detected towards the later Republican period and in Augustan times. This can clearly be observed not only in the case of Monte dos Castelinhos discussed above,[64] but also in the military camp of Alto dos Cacos, in Vila Franca de Xira, in which spindle whorls and loom weights were also retrieved,[65] and in the fort of Caladinho, in Alandroal, which has yielded a substantial number of loom weights.[66]

[62] Alarcão *et al.* 2010.
[63] Pinto and Schmitt 2010: 221.
[64] Pimenta 2024: 407.
[65] Pimenta *et al.* 2013: 272, fig. 16.
[66] Mataloto 2002: 180; Mataloto *et al.* 2014: fig. 10.

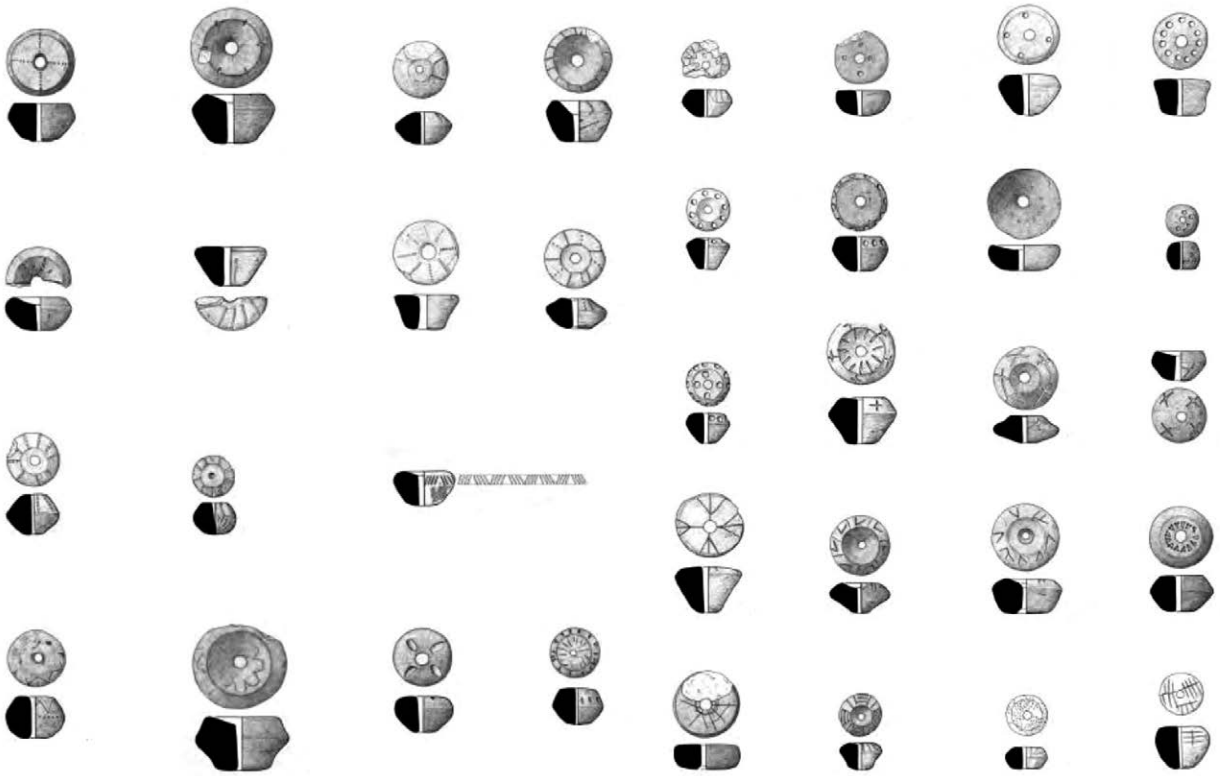

Figure 14: Examples of spindle whorls retrieved in Castelo da Lousa (drawing: after Pinto and Schmitt 2010).

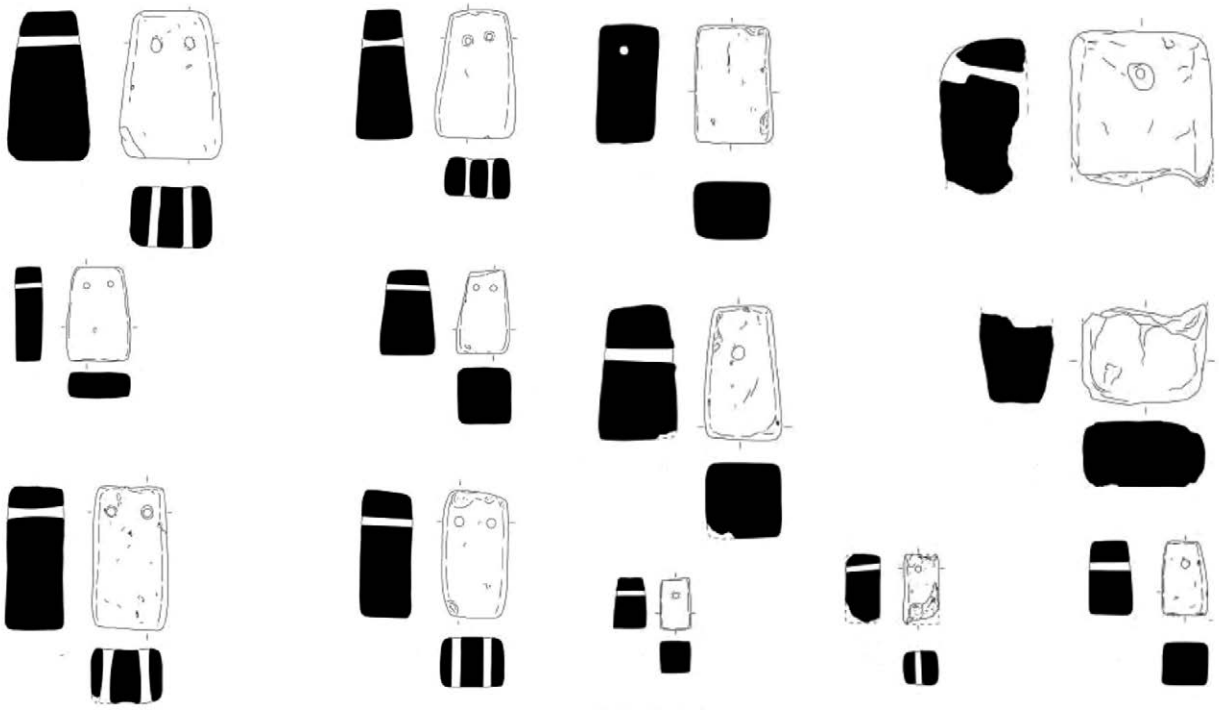

Figure 15: Examples of loom weights retrieved in Castelo da Lousa (drawing: after Pinto and Schmitt 2010).

Textiles on the march: towards an interpretation of textile supply during the Roman conquest of Western Iberia

In light of the evidence presented above, it can be said that textile activities are well-documented in the Late Republican military or militarised contexts of Western Iberia. Textile-related implements, chief among which loom weights and spindle whorls, can be found in 'classical' military establishments, such as Cáceres el Viejo,[67] in settlements with a strong military component founded *ex novo* in the framework of the Roman conquest, such as Monte dos Castelinhos[68] and perhaps Pedrão,[69] in likely indigenous sites which housed military contingents, such as Chibanes[70] and Cáceres Viejo,[71] as well as in later fortifications related to the pacification and administration of the early provincial territory, such as Castelo da Lousa.[72]

This panorama clearly indicates that, despite the lack of written and inscriptional evidence comparable to that available for the Imperial Age,[73] archaeological data can offer us insights into the issue of textile supply to the Roman Republican armies. This is crucially important, as there are reasons to believe that such a supply may have been quite different in nature during these earlier times. In fact, the contexts presented here predate Augustan military reforms and the rise of a permanent standing army, the supply of which was ensured by the state and its agents in a more direct way, benefitting from the complementary resources of different provinces and the relative ease of long-distance trade.[74]

While the existence of long-distance, state-sponsored supplies cannot and should not of course be ruled out for the period considered here, the southwestern Iberian examples discussed in this contribution show different facets of textile supply. On the one hand, examples such as Cáceres el Viejo show a local production within 'classical' military camps which, while probably not enough to supply the entire military detachment camped there, may have been enough to ensure the maintenance of existing textile elements and to respond to emerging needs.[75]

On the other hand, however, there are several indications that the Roman military presence induced an increased textile production among apparently local communities, in the context of military or militarised sites and areas. This seems to be the case in Monte dos Castelinhos[76] and Chibanes,[77] but likely also in Cabeça de Vaiamonte,[78] although in the latter site, religious considerations may also have been at work.[79] The available data is not clear on whether this resulted from a simple demand and supply effect, or rather from the imposition of tributes and levies, or even from the establishment of more direct modes of dependency, as potentially suggested by the 'in-house' textile production in the militarised contexts of Chibanes.[80]

This being said, and from a technological point of view, it is worth noting that the characteristics of most textile tools documented in the sites discussed here, and particularly of the loom weights and spindle whorls, do not differ radically from what was known regionally during the Late Iron Age.[81] This could further point to the active role of members of local/regional groups in supplying the army, but it raises the question of whether those members were actually embedded in military contexts (as could be the case in Cáceres el Viejo or Chibanes) or merely juxtaposed to them.

While this must remain an open question, the technological features of the material discussed here also offer some insights into the impact (or lack thereof) of the Roman army on the regional textile crafts. In fact, and beyond issues relating to the scale and possibly the organization of production (see above), the available evidence does not seem to indicate any radical technological shifts in regional textile activities during the Late Republican period. It is therefore likely that, as in many other regards, the true reorganization and transformation of textile production in the area under study was a product of Augustan reforms and reorganization.[82]

However, in order to clarify the potential context of textile production in the military and militarised sites discussed here and, conversely, their impact on the regional textile economies, further research is still required. In particular, it would be useful in the future to develop comparative approaches setting the emerging patterns of textile production against those of other craft activities also present in these and other military/militarised contexts.

Such an approach, however, goes beyond the scope of this contribution. Still, it is hoped that this preliminary

[67] Pereira 2025.
[68] Pimenta 2013; 2024.
[69] Soares and Silva 1973.
[70] Pereira *et al.* 2021.
[71] Pereira and Dias 2020.
[72] Pinto and Schmitt 2010.
[73] E.g. Sheridan 1998; Droß-Krüpe 2011 and 2012; Liu 2012, with bibliography.
[74] For important overviews, see Wild 1976; Sheridan 1998; Droß-Krüpe 2011; Liu 2012.
[75] Pereira 2025.
[76] Pimenta 2013; 2024.
[77] Pereira *et al.* 2021.
[78] Pereira 2013; 2018.
[79] Gomes *et al*. in press.
[80] Pereira *et al.* 2021.
[81] Berrocal-Rangel *et al.* 1994; Berrocal-Rangel 2003; Gomes 2021.
[82] For an overview of the evidence for the Early Imperial period, see Bustamante Álvarez 2018; Alfaro Giner and Martínez García 2019.

survey has at least shed some light on an often-overlooked aspect of the supply of Roman Republican armies – one that was nonetheless critical to ensure the success of military campaigns and assignments. It is believed that, through further and more in-depth analyses, the archaeological data surveyed here, and that of other comparable sites, holds the potential to offer much clearer and well-developed insights not only into issues of military supply, but also on the role of the army in changing the landscape of textile production in the territories which came under Roman influence and control during the Late Republican period.

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Reused and Recycled Textiles from Judean Desert Sites Associated with the Jewish Rebels Who Fought the Romans During the 1st and 2nd Centuries AD, Compared to Finds from Contemporary Nabatean Sites in Southern Israel

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Abstract: During the 1st and 2nd centuries AD, Jewish rebels were placed under siege twice by the Romans. Of necessity, they were forced to reuse and recycle their textiles. The large number of repairs and patches on their clothes indicate the harsh conditions they endured while under siege during both the first Jewish revolt (AD 66-73) and the second (the Bar Kokhba revolt, AD 132-135).

Almost every textile from the first Jewish revolt found at Masada is fragmentary. The special conditions at Masada, where certain people were cut off from supplies for several years, make it very likely that even those who were not used to wearing shabby and patched clothing were forced to do so.

During the second revolt, many rebels hid in caves within the Judean Desert. The burials discovered in the Cave of Letters shed some light on the war. Most of the shrouds were made from tunics and mantles, usually from wool that had been ripped apart for this purpose. Linen sacks were also in secondary use as shrouds. In addition, although textiles of excellent quality, including two that were dyed with 'true purple', were found at caves in Wadi Murabba'at, they had been heavily patched and re-patched.

During the same period, the situation of the Nabateans was completely different. From the 3rd century BC to the 3rd century AD, they possessed a monopoly over camel caravans on the 'Incense Route' that linked the Arabian Peninsula and Red Sea to the Mediterranean Sea. In AD 106, they accepted the Roman annexation of Nabatea and prospered. Hundreds of textiles were found at way-stations like Orhan Mor (Moyat 'Awad, Mo'a), Sha'ar Ramon and 'En Rahel, providing some indication of the wealth of the inhabitants. Patched textiles are few.

Keywords: Cave of Letters, Christmas Cave, Jewish rebels, Masada, reused and recycled textiles, Roman siege

Methodology

In this paper, I will describe the location of the sites under discussion, along with the timeline of the two Jewish revolts. I will combine historical written sources with archaeological finds.

First I describe the general characteristics of Roman period textiles in the Land of Israel: materials, garments and uses of textiles other than as garments. Then I describe two of the most important and representative Judean sites connected to the violent events of the two uprisings that also yielded textiles: Masada and the Cave of Letters, where we see signs of the reuse and recycling of textiles. The conclusion that this phenomenon is related to the consequences of war is then reinforced by comparison with the sites of Nabatean-controlled regions such as Moyat 'Awad (Mo'a),[1] Sha'ar Ramon and 'En Rahel[2] where the population did not confront the Romans and patching is rare.

The archaeological contexts referred to are highly varied: burials combined with extreme circumstances/disaster in the case of the Cave of Letters and extreme circumstances/disaster without burial in the case of Masada and most of the other sites connected to the first and second revolts.

Archaeological contexts referred to at Nabatean sites along the trade routes include buildings and rubbish dumps or Nabatean burials such as at 'En Tamar and Khirbet Qazone.

Introduction

Location of the sites

Thousands of textiles from 10,000 BC until the present day were discovered in the Judean Desert. They were found in 400 natural caves, spread in the deep canyons and along the high escarpment west of the Dead Sea and the Jordan Valley where the climate is dry. The Roman period, 1st century BC until the 2nd century AD, yielded

[1] Shamir 2005b.
[2] Shamir 1999.

Figure 1: Map of the Judean Desert.

textiles from Qumran,[3] Masada,[4] the Nahal Hever Caves (including the Cave of Letters), the Cave of the Treasure,[5] the Christmas Cave,[6] the Wadi Murabba'at caves,[7] the Cave of Horror[8] and the caves around Jericho (Figure 1).[9]

The Negev Desert and the Arava Valley yielded textiles at sites on the Nabatean 'Incense Route' linking the Arabian Peninsula and the Red Sea to the Mediterranean Sea, connecting Petra and Gaza: Mo'a, Sha'ar Ramon, 'En Rahel, Qasra etc.[10] The Nabateans were middlemen in this trading complex. They controlled one of the crucial overland passages and could tax merchandise passing through their territory northwards to Syria and westwards to the Mediterranean (Figure 2). They also undertook much of the transport themselves. They overcame the physical difficulties of the region and set up caravanserais, watering points and fortresses. The goods that were transported included perfumes, spices, paint pigments, precious metals, pearls and textiles. The Nabatean kingdom was annexed by the Romans in AD 106 and renamed Provincia Arabia. The sites were abandoned in an orderly fashion and the inhabitants took their goods with them, leaving behind only certain artifacts that we can research.[11]

Timeline

The Jewish population usually suffered during the rule of the Roman governors. Their harsh policies stirred the first Jewish revolt in AD 66, largely suppressed after the fall of Jerusalem to the Roman army in AD 70; the last Jewish stronghold, the Masada fortress, was captured in AD 73.[12]

Most of the Land of Israel was subject to Rome in AD 69, except for Jerusalem and the fortresses of Herodium, Masada and Machaerus. At that time, Roman commander Titus made preparations for the

[3] Crowfoot 1955; Shamir and Sukenik 2011; Sukenik *et al.* 2019.
[4] Sheffer and Granger-Taylor 1994.
[5] Bar-Adon 1971; Shamir 2020.
[6] Shamir and Sukenik 2011.
[7] Crowfoot and Crowfoot 1961; Cohen *et al.* 2023.
[8] Sukenik 2023.
[9] Shamir and Schick 2019; Shamir and Sukenik 2020.
[10] Bar-Oz *et al.* 2022; Erickson-Gini and Israel 2013; Shamir 2003; 2004.
[11] Shamir 2016a.
[12] Netzer 1991; Yadin 1966.

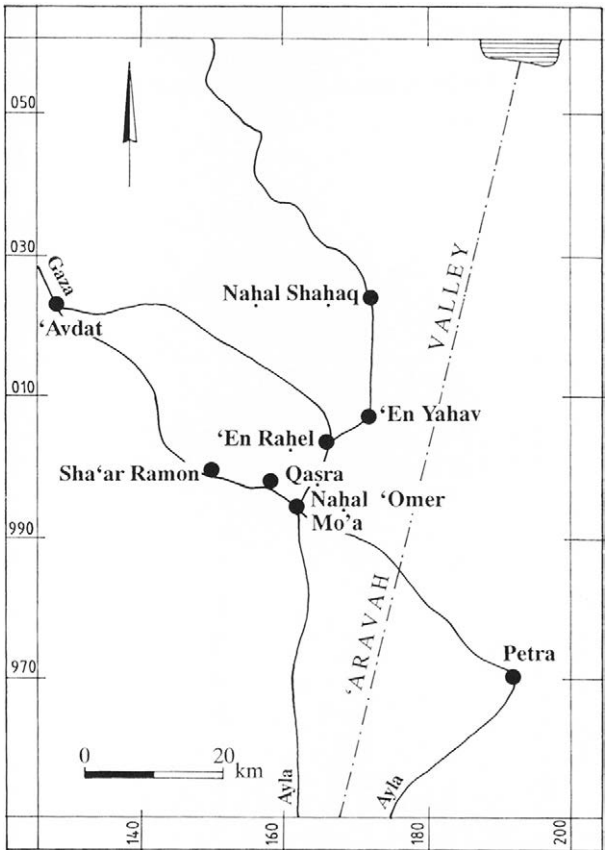

Figure 2: Location of sites along the Incense Route (after Baginski and Shamir 1995: 21; Shamir *et al.* 2023: 176).

siege of Jerusalem and, after violent battles, he was able to destroy the Temple and then the entire city. The Tenth Roman Legion remained behind in Jerusalem as a garrison. Among the prizes of war carried in the triumphal march were two precious golden objects from the Temple of Jerusalem – the Table of Shewbread and the Seven-branched Candlestick.[13]

The fortresses of Herodium, Masada and Machaerus remained in rebel hands. Their destruction was assigned to Lucilius Bassus, the governor of Judea at that time. After Lucilius Bassus died in AD 72, it fell to his successor, Flavius Silva, to capture Masada. The Sicarii, under the leadership of Eleazar ben Yair, had established in this fortress at the very beginning of the war and were in control. The Romans managed to overcome the fort following a long siege and a direct assault. According to Flavius Josephus, when Eleazar saw that there was no longer any hope of resisting the assault, he addressed the garrison, asking them first to kill their own families and then one another. When the Romans entered, probably in April 73, they discovered with horror that no work remained for them to do.[14]

The people of the Land of Israel were impoverished and fearfully reduced by the seven-year war.[15]

The second revolt, led by Simon Bar Kokhba, resulted in initial success for the Jews who conquered Jerusalem and re-established the Jewish state. This was a threat to the Roman Empire under Hadrian, who was forced to dispatch the best of his legions to the Land of Israel to fight the rebels. Many of them were hidden in the Judean caves (Figure 1) spread in the deep canyons and along the high escarpment west of the Dead Sea and the Jordan Valley. Iulius Severus, one of Hadrian's most outstanding generals, was recalled from Britain to direct the campaign against the rebels hidden in those caves. He cut off their supplies. The burials in the Cave of Letters and the Cave of Horror in Nahal Hever shed some light on the war. The rebellion was finally crushed by the Romans in AD 135.

In the course of the revolt, 50 forts and 985 villages were destroyed; approximately 580,000 Jews fell in battle, with those who succumbed to illness or starvation uncounted. Many were sold as slaves. There were also significant Roman casualties, as stated by Dio Cassius: 'Many Romans, moreover, perished in this war. Therefore Hadrian in writing to the Senate did not employ the opening phrase commonly affected by the emperors "I and the legions are in health."'.[16]

During the 1st and 2nd centuries AD, Jewish rebels under Roman siege reused and recycled textiles.[17] The number of repairs and patches indicates the harsh conditions they endured.

On the other hand, the Nabateans, who possessed a monopoly over camel caravans on the 'Incense Route' linking the Arabian Peninsula and Red Sea to the Mediterranean Sea, accepted the Roman annexation of Nabatea in AD 106 (Figure 2).[18] Following the annexation of Herod Agrippa II's kingdom in AD 92 or 93 to Judea and Syria, the only remaining client state on the eastern frontier was Nabatea, lying to the south and east of the province of Judea. It was annexed by the Romans in AD 106 to the newly established Provincia Arabia. The Palestinian limes system was expanded southwards to penetrate and control the new province.[19]

Hundreds of textiles were discovered at the Nabatean way-stations such as Moyat 'Awad (Mo'a),[20] Sha'ar Ramon and 'En Rahel,[21] dating from the 1st century BC to the 2nd century AD. These way-stations provide

[13] Schürer 1973a: I, 496-510; II.
[14] Schürer 1973a: I, 511, but see also Ashkenazi *et al.* 2024; Magness 2019.
[15] Schürer 1973a: II, 512-513.
[16] Dio Cass. 69.12-15.
[17] For terms, see Grömer 2017.
[18] Bar-Oz *et al.* 2022; Cohen 1982.
[19] Smallwood 1976: 348-355.
[20] Shamir 2005b.
[21] Shamir 1999.

some indication of the prosperity of the inhabitants. Rare and expensive dyes were used, such as oak-kermes insect dye (*Kermes vermilio*) (Figure 3)[22]. Patched textiles are few.[23]

Roman period textiles found in the Land of Israel

Although we find a variety of fibres in the textiles like linen, goat hair and camel hair, wool was the most common material for textiles in the Land of Israel in the Roman period and was most commonly used for garments. More than that, this material was readily available, and the fibres were easy to dye, unlike linen which does not easily absorb dye, with the exception of the blue dye.[24] We have observed that in most of the sites from the Roman period, the percentage of linen is less than 23%.

Mixing wool and linen fibres, *shaʿatnez* in Hebrew, is very rare in the Land of Israel. Jewish law forbids *shaʿatnez* – wearing garments of mixed wool and linen. This is mentioned twice in the Hebrew Bible: it is written in Leviticus 19:19, where it is stated that 'you shall not put on cloth from a mixture of two kinds of material'. *Shaʿatnez* garments are mentioned but the specific materials are not listed. In Deuteronomy 22:11, however, it is added that 'You shall not wear cloth combining wool and linen'.[25] Indeed, although thousands of textiles have been examined, not one piece of *shaʿatnez* was found at Jewish sites.[26] This stands in contrast to Palmyra or sites in Coptic Egypt, which yielded great quantities of textiles made of mixed linen and wool.[27] The meticulous avoidance of *shaʿatnez*, despite the frequent hardship of war and the certain temptation to buy these textiles from non-Jews at the markets, is impressive and must have caused technical weaving problems.[28] A few *shaʿatnez* were found at Nabatean sites such as at 'En Tamar.[29]

The common dress in the Jewish community was identical to the common Roman dress all over the Roman world. It consisted of two main garments: the tunic (Figures 4-6) and the mantle (Figures 7-8). The tunic was decorated with bands and the mantle with gamma-shaped or H-shaped designs in a broad rainbow of colours, including red, purple, black, blue and green.

For example, among the woollen textiles found in the Cave of Letters, there was a large group of rectangular sheets with two parallel bands comprising two identical

Figure 3: 'En Rahel, wool textile dyed with oak-kermes insect dye (*Kermes vermilio*), IAA no. 1997-9135 (photograph: Clara Amit, Israel Antiquities Authority).

sheets joined together along one selvedge. The section between the bands was left unsewn, forming a slit between the two sheets to serve as a neck opening. Thus a tunic was formed with two bands running down from the shoulders, on both the front and the back, although they were woven horizontally (Figure 4). Head coverings, hairnets and socks were also found.[30]

Uses of textiles other than in garments include floor coverings, towels, bags, sacks, scroll wrappers, and shrouds.[31]

[22] Koren 1999.
[23] Shamir 2003; 2004.
[24] Sukenik *et al.* 2019.
[25] Shamir 2017b; 2017c.
[26] Shamir 2014; 2016b; 2017; Sukenik 2023.
[27] Baginski and Tidhar 1980.
[28] Shamir and Sukenik 2020.
[29] Shamir 2006b; Shamir 2016b.
[30] Shamir and Sukenik 2020.
[31] Shamir 2005a; Shamir and Sukenik 2020.

Figure 4: The Cave of Letters, tunic, IAA no. 1996-9132 (photograph: Clara Amit, Israel Antiquities Authority).

Figure 5: The Cave of Letters, tunic, IAA no. 1996-9116 (photograph: Clara Amit, Israel Antiquities Authority).

Figure 6: The Christmas Cave, a band in secondary use, IAA no. 577004 (photograph: Clara Amit, Israel Antiquities Authority).

Masada

Masada is the main site from the first revolt that yielded textiles. Other textiles were found at the Qumran caves, all made of linen.[32] Out of *c.* 3000 textiles from Masada, only 129 representative items were fully published, so we do not have full information. They are made of linen (12), goat hair (12) and wool (105). A few wool textiles twills and weft-faced compound tabbies were probably imported to the Land of Israel. Six were dyed with 'True Purple'.

Almost every textile at Masada is fragmentary. The majority – their small size, torn edges, extensive wear and multiple repairs (Figure 9) – confirm that they had become rubbish or at least had been reduced to the status of rags. The linen textiles all appear to have been well used. The goat hair fragments are very shabby and brittle. The wool textiles are worn, showing repairs and patches. Most of the sewing appears to have been carried out when the textile had already been used for some time, to repair or adapt the cloth for a secondary use. The special circumstances at Masada in which one group of people was isolated and cut off from supplies for several years make it very likely that even individuals not accustomed to wearing heavily worn and patched clothing were forced to do so.[33]

The dominant impression given by the textiles of Masada is of a wealthy community fallen on hard times. In terms of quality, the Masada textiles (Figures 9-10) mostly range from very good to medium. On average they are finer than those from the neighboring sites of the Cave of Letters and Murabba'at, which are from the second revolt.

The defenders of Masada owned a range of different types of cloth, a reflection of their extensive cultural links, as well as another sign of their comparative affluence. Bands, shaded bands, tapestries of gamma or notched bands are usually an indication for their garments: tunics and mantles.

At Masada there is another class of finds: a small group of textiles that were not conspicuously worn or mended, but show evidence of burning, as they were apparently still in use until the end of the siege. They may have been burnt in the fires that Josephus tells us were made by the defenders or they may have been accidentally damaged during the violent events.[34]

A. Sheffer and H. Granger-Taylor took into consideration that the small size of the majority of fragments also points to the site having been thoroughly looted by the Romans of anything of any value.[35]

It appears that some of the textiles were woven by the Jews at Masada despite the harsh conditions of the siege, as evidenced by the remains of looms, unfired pyramidal loom weights and spindle whorls. These were found in the casemate rooms.[36] The loom weights

[32] Crowfoot 1955; Shamir and Sukenik 2011; Sukenik *et al.* 2019. In Qumran, textiles were not preserved at the site, only in the caves. In Qumran Cave 1, only one textile, a scroll wrapper, was patched, while the rest do not bear any sign of mending. For the textiles in Cave 11 there is more mending, darning and patches, but there is not any indication that it has any connection to the war.

[33] Sheffer and Granger-Taylor 1994.

[34] Sheffer and Granger-Taylor 1994: 238.

[35] Sheffer and Granger-Taylor 1994: 238.

[36] In 15 BC, therefore the Herodian period, the entire site of Masada – except for the Northern Palace of Herod – was enclosed by a casemate wall, which consisted of a double wall with a space

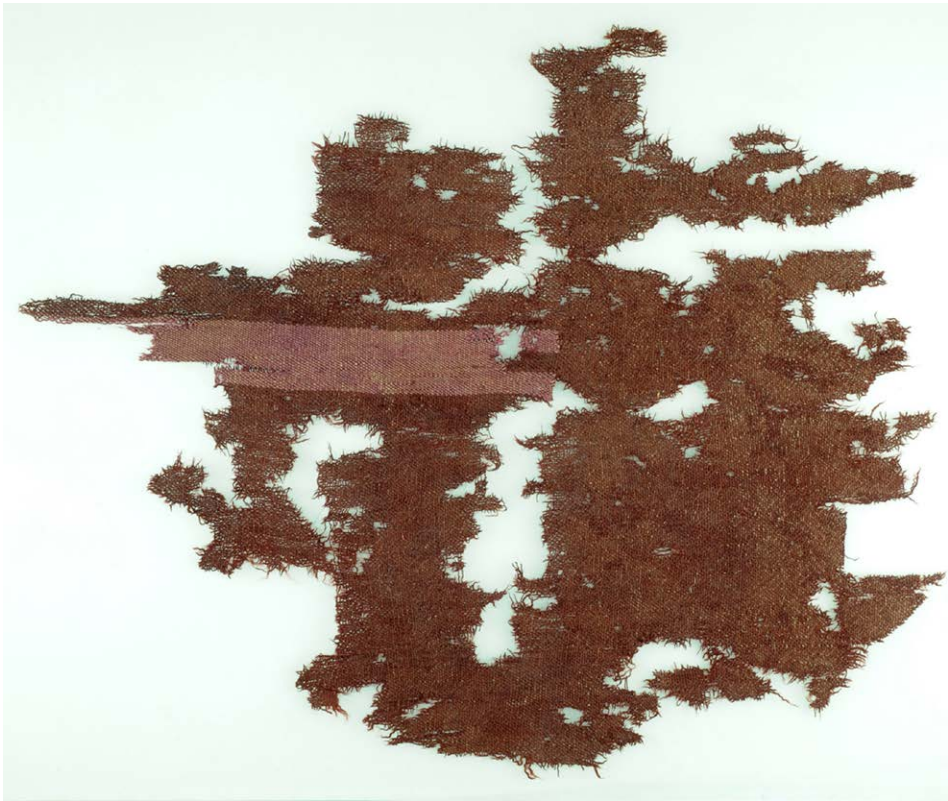

Figure 7: The Cave of Letters, a mantle decorated with H-shaped bands, IAA no. 1961-1386 (photograph: Clara Amit, Israel Antiquities Authority).

Figure 8: The Cave of Letters, a mantle decorated with Gamma-shaped bands, IAA no. 1961-1366/1 (photograph: Clara Amit, Israel Antiquities Authority).

Figure 9: Masada repairs, IAA no. 2001-9075 (photograph: Clara Amit, Israel Antiquities Authority).

Figure 10: Masada wool textile, IAA no. 1995-9067 (photograph: Clara Amit, Israel Antiquities Authority).

were produced locally and were not manufactured by experts skilled in such work. The loom weights are unfired, in contrast to loom weights at other sites in the region from the Hellenistic and Roman periods. The pyramidal loom weights from Masada differ from each other in size and weight, providing evidence that they were not mass-produced in molds. The four sides of the pyramid are not always symmetrical. The weight range is very high, from 91.4 g to 590 g. The hole is not necessarily centered.[37]

Almost all the loom weights were discovered in casemate rooms which were large enough to contain looms and make possible textile-related activity. All *loci*

between that was divided into rooms by perpendicular walls; these rooms were used as living chambers for the soldiers and as extra storage space. During the first Jewish revolt, they were used by the Jews under siege.

[37] Shamir 1994.

Figure 11: The entrances to the Cave of Letters (the two openings slightly right of center in the photo) lie 90 m below the desert plateau and 200 m above the valley floor (after Freund and Arav 2001).

yielding loom weights contained textiles as well. One textile[38] appears to be newly made or unused and was perhaps woven at the site.[39]

The Cave of Letters

Many Judean Desert caves yielded textiles from the period of the second revolt, but The Cave of Letters (Figure 11) is the most important. It has two openings, seven meters from each other, and access to them is difficult. It has three halls and some crevices. Above the cave, there was a Roman siege camp. Another camp was also discovered on the southern side of the ravine. The name of the cave is derived from the letters dated to the Roman period which were found there. In 1960-1961 the cave was excavated by Prof. Y. Yadin and his team. He published 92 textiles but there were many more.[40]

In 1999-2001 the Cave of Letters excavations conducted by P. Reeder, R. Freund, H.J. and C.E. Savage[41] used advanced technological tools including a radar and a fiber-optic endoscope that allowed them to observe what was taking place in the blocked-off areas between narrow cracks or in the spaces under the rocks (Figure 12). During this excavation, another 254 textiles were found and were published by me.[42]

The importance of the Cave of Letters lies in the fact that the textiles and other artifacts can be dated precisely to the end of the Bar Kokhba revolt, a time when the cave was used as a refuge by the Jews.

The most important textile finds in the Cave of Letters were made in three natural niches in Loci 2, 3 and 8 in Hall C and passageway BB, mainly used for secondary burials. Concentration of skulls, bones and jaws were found placed in baskets and mats and wrapped in textiles. Many tunics, mantles, spreads and wrappers, scarves and sacks were thus found. In one of the baskets the skull and bones of a child were found wrapped in a tunic (Figure 4).

The burials in the Cave of Letters shed some light on the war. Most of the shrouds were converted from tunics and mantles,[43] usually made of wool, that had been ripped apart for this purpose. Linen sacks were also secondarily used as shrouds.

There were more examples of tunic single sheets than double ones. It is assumed that most of the tunics had been ripped apart for use as shrouds. This assumption is supported by traces of sewing and selvedge fragments of twin sheets still sewn together (Figure 4).[44]

Some tunics had been repaired several times.[45] The great number of fragments may indicate there were two sheets that comprised one tunic. Some examples[46] have patches on the shoulder which may indicate that the tunic was torn during movement through the narrow passages in the cave. The patches are of blue and red material - colours quite different from that of the sheet. It seems that sheets with *clavi* (e.g. Figure 5), though primarily intended for tunics, were also used for other purposes such as scroll wrappers.

Double-sheet No. 8.4 was found in Niche 8 where it served as a shroud. It is actually made up of two tunic sheets woven together on one web. The two parts are identical in size, colour, pattern, weave and weight of thread. They are separated by a narrow band of bare warp threads, about 3 cm wide. It is assumed that a rod had been placed within the warp after one sheet had been finished. There may have been another, similar double sheet attached, a small piece of which may remain sewn near the bare warp band. The threads at the edge of this piece are of the same colour. If this is correct, the entire cloth consisted of two double sheets sewn together, thus measuring 2.0 m x 2.3 m, which could have served a function other than a tunic (blanket or spread).

Except for one mantle found almost intact (No. 8.11), most items of this type were badly ripped.

[38] No. 9-288, Sheffer and Granger-Taylor 1994: 188-189.
[39] Reich 2007; Shamir 1994.
[40] Yadin 1963.
[41] Savage *et al.* 2017.
[42] Shamir 2017a.
[43] Yadin 1963: 204-277.
[44] Yadin 1966.
[45] Yadin 1966, e.g. no. 2.32, IAA 97-9032.
[46] Yadin 1966, e.g. no. 2.33.

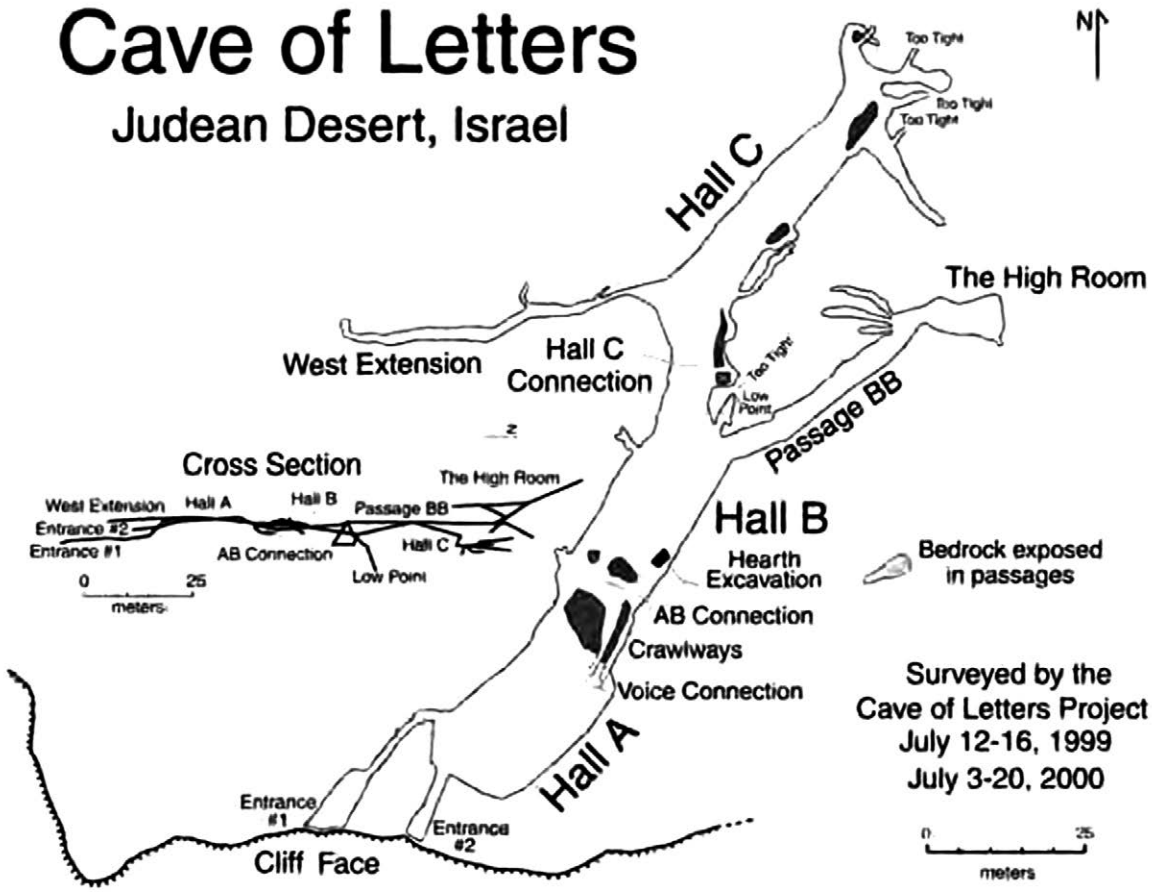

Figure 12: Map of the Cave of Letters (after Savage *et al.* 2017: 85, fig. 4.7).

A green spread (Figure 13) was decorated with pink and black shaded bands. On the borders there are fringes about 10 cm long. When it was found, parts of the selvedges were still sewn together; it was sewn as a cylinder, probably at the time of the burial around which it was wrapped.

The textiles were not manufactured in the cave, but were brought there, either worn by the people or in bundles. Some textile finds were used as garments in their final stage, but most were found in secondary use as shrouds, wrappers, bandages, etc.

Like at Masada, the dominant image conveyed by the colourful textiles is that of a wealthy community fallen on hard times. They were dyed with a small number of plant-based dyes and by a professional artisan.[47] This is also indicated by other artefacts, such as the Roman coins with their original images defaced and replaced by the inscriptions 'Shimeon' on one side and 'to the Freedom of Jerusalem' on the other, the two caches of letters, a bronze hoard, consisting of various vessels and incense shovels and several glass vessels (one bowl and two plates).[48] All these are evidence of the well-off status of the occupants of the cave: according to the research literature, they were among the commanders of the revolt.[49]

Other caves in the Judean Desert

Many other Judean caves beside the Cave of Letters were occupied during the Bar Kokhba revolt, which yielded, like the Cave of Horror and the Christmas Cave, numerous textiles cut into strips and patched textiles (Figure 6). The broad rainbow of colours was achieved principally through the use of three different dyes: madder, plant-based indigotin and weld. The other hues were produced by double-dyeing techniques and by changing various parameters that affect the dyeing process – stabilisers, the periods of time the wool was immersed in the dye solution, level of acidity etc. The high quality of the textiles from the Cave of Letters and

[47] Sukenik *et al.* 2016.

[48] Yadin 1963: 42-121.

[49] Sukenik *et al.* 2016; Yadin 1963, 44.

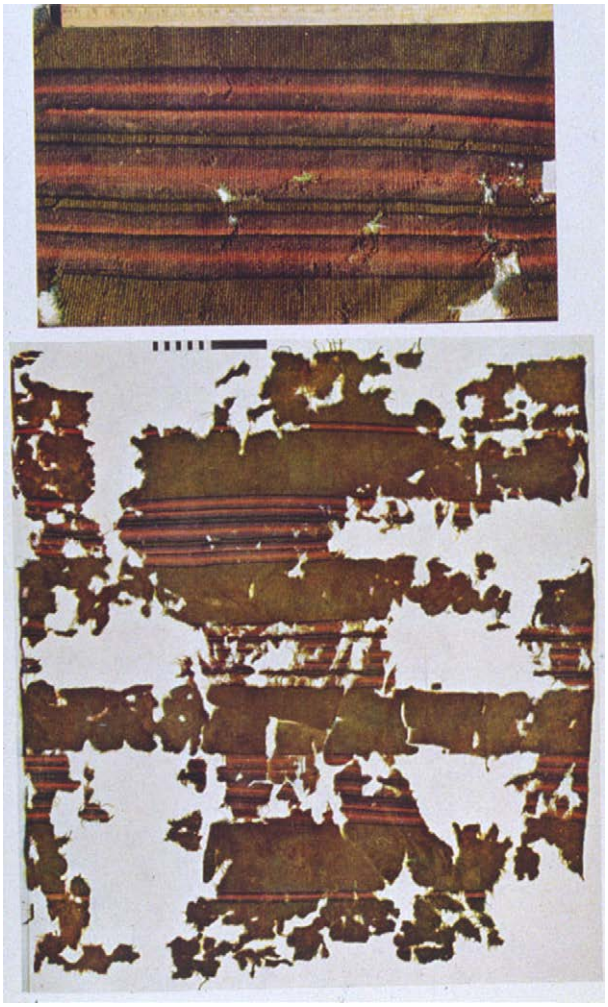

Figure 13: The Cave of Letters, a green spread, IAA no. 1996-9117 (photograph: Clara Amit, Israel Antiquities Authority).

the many colours produced required great precision and proficiency in the dyeing process. No textile dyed with an animal-based dye was found in the Cave of Letters.[50]

Although Wadi Murabba'at contained textiles of excellent quality, they were heavily patched and re-patched.[51]

'True Purple'-dyed textiles whose dye was extracted from murex snails and were patched in a few cases were found in the Land of Israel only at Masada52[52] and Wadi Murabba'at Caves[53] (Figure 14), but not at Nabatean sites. However, analysis of various textile parameters, including weaving techniques and spinning methods,

Figure 14: Wadi Murabba'at, purple-dyed textile, IAA no. 490063 (photograph: Clara Amit, Israel Antiquities Authority).

suggests that these textiles were imported and may have been brought by the Roman army.

N. Sukenik convincingly concluded: 'analysis of the organic assemblage from the Cave of Horror, also from Bar Kokhba period, enables us to cautiously propose that the site inhabitants were members of the upper class. Notwithstanding the diminutive size of the extant pieces, the fine nature of the textiles supports this hypothesis. The fibres were carefully selected and the quality of weaving and dyeing is high, even surpassing those from the Cave of Letters. Also, the unique imports point to the high economic status of the people who found refuge in the remote Judean Desert'.[54]

Nabatean Textiles

By the Persian period (c. 538–332 BC), the Nabateans had gained control of the aromatics trade from their nomadic neighbors. Petra was in a strategic location that afforded the Nabateans ready access to the Red Sea, Egypt, the Mediterranean coast and Syria. The secret of the Nabatean control of the Negev was the water channeled into the massive cisterns that they hewed near desert tracks. The Nabateans maintained their autonomy until their kingdom was incorporated into the Roman Empire in AD 106. Throughout most of the 1st century BC, Roman interests in the East were not an immediate threat to Nabatean sovereignty, but the extension of Roman control over Egypt under Augustus created new economic realities in the Mediterranean sphere. The demand for aromatic substances such as incense resins and spices in the Roman world skyrocketed. In Petra, the Nabateans used their great wealth to build monumental tombs, palaces

[50] Rasmussen *et al.* 2022; Shamir and Sukenik 2010; 2011.
[51] Crowfoot and Crowfoot 1961.
[52] Koren 1994.
[53] Sukenik *et al.* 2013.
[54] Sukenik 2023.

and temples on a scale that rivaled those found in any city of the ancient world. The way-stations provided caravans with shelter, water and fodder.[55]

Preserved by the arid climate, the perishables at Moyat 'Awad (Mo'a),[56] Sha'ar Ramon,[57] and 'En Rahel[58] display a remarkable variety of materials, techniques and dyes, suggesting their diverse geographical origins. The textiles were usually discovered in buildings, except for Sha'ar Ramon, where the textiles were found in the waste dump.

These sites were usually abandoned in an orderly fashion and the inhabitants took their goods with them leaving behind only some artifacts helpful to our research.

Finds from the 'En Rahel[59] excavations included about 300 textiles and basketry fragments, cordage, spindle whorls and needles dated from the 1st century BC to the 1st century AD.

Four textiles from 'En Rahel provide the first evidence that the rare and expensive oak-kermes insect (*Kermes vermilio*) dye was used for ancient textiles in Israel (Figure 3). Textiles are decorated with bands, shaded bands, tapestry, H- or gamma-shaped designs. Six fabrics at 'En Rahel bear patches, covering tears or worn areas where only the warps remained. The patch colours are identical to those of the fabric, with the exception of one, which has a red band.

Orhan Mor (Moyat 'Awad, Mo'a)[60] yielded 333 textiles, including twill and many colourful textiles. Dated from the 1st century BC to the 3rd century AD, they provide some indication of the prosperity of the inhabitants along the Incense Road. The other materials at Mo'a, such as glass, ceramics and wood artifacts[61] also indicate a high standard of living.

Textiles from Mo'a demonstrate a greater variety of techniques (such as twills) and dyes that differ from 'En Rahel. This may be due to the position of Mo'a on the main road from Petra to Gaza, which was probably more frequently used by caravans. In addition, the findings at Mo'a belong to a later date than those from 'En Rahel. Several textiles are imported and this proves that there were commercial connections with other communities or with Roman troops who passed through the site.

The textiles found at Nabatean sites provide some indication of the prosperity of the inhabitants along the Incense Road. The other materials such as glass, ceramics and wood artifacts and even an imported alabaster vessel for perfumes from Yemen at 'En Rahel[62] also demonstrate a high standard of living. The spinning and weaving workmanship is of a high standard. In general, the uniformity of dyeing in the samples analyzed is of very high quality; this homogeneity is even visible on the microscopic level.[63] All these features and the ability to obtain these clothes attest to the high economic status of these Nabatean tradesmen and merchants, 'sailors of the desert', living two thousand years ago.[64]

A similar image is conveyed by the Nabatean funerary assemblages.

Nabatean burials such as those at 'En Tamar[65] yielded linen textiles, some of them decorated with wool bands. These do not display any stitching or signs of reuse and were primarily used as shrouds, another indication of the high economic status of the deceased. The many thin leather fragments of good quality were probably parts of shrouds, as is also the case at Khirbet Qazone[66] and Hegra.[67]

At Khirbet Qazone, originally located on the eastern shore of the Dead Sea, a cemetery of 3500 graves was discovered. The graves in which men, women and children were buried, have a characteristic form consisting of a dug shaft with an offset burial niche at the bottom. They are dated to the 1st and 2nd centuries AD (although some of the textiles have features that point to the 3rd century AD). Some of the bodies were encased within decorated and stitched leather shrouds. Others were still wrapped in reused textiles used as shrouds, such as tunics, mantles and scarves; they exhibit a range of repairs, particularly patching. There is a small number of items made specifically for burial, e.g. decorated leather shrouds encountered in seven burials and a new shroud made of linen that was not previously used or washed. It was found in a burial of a six-year-old girl as the outer wrapping above items of clothing: a mantle, a tunic and a red belt.

Conclusion

Whereas textiles found in Israel at Masada and the Judean Desert Caves show a considerable number of patches, those found in the Nabatean region, which did not confront the Romans, only rarely display such

[55] Erickson-Gini and Israel 2013.
[56] Shamir 2005b.
[57] Shamir 2005a.
[58] Shamir 1999; 2003.
[59] Shamir 1999.
[60] Shamir 2005b.
[61] R. Cohen, pers. comm.
[62] Erickson-Gini 2006.
[63] Koren 1999.
[64] Shamir 2003.
[65] Shamir 2006b; 2016b.
[66] Politis 1998; 1999; Shanks 1999.
[67] Bouchaud *et al.* 2015.

reworking. This might demonstrate that the high frequency of patching and recycling in Judea is related to war.

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‘Quod Satis in Usum Fuit Sublato’. Booty and Tribute as Textile Supply Sources for Ancient Greek and Roman Armies

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Abstract: Textile and leather objects such as clothing, tents, ship sails and cables, or ropes and tow were useful or even indispensable items for Greek and Roman armed forces during the 1st millennium BC, whether they were engaged in small-scale raids for plunder, petty border disputes or major hegemonic wars. By collecting, organising and analysing a range of ancient sources – primarily literary narratives and epigraphic documents – this work aims to evaluate the extent and significance of the acquisition of such items through looting and various types of tribute and ransom. Despite scarce evidence, it is shown that whenever it was expedient, Greek and Roman armies and navies provisioned themselves with garments, tents, sails and cordage taken as loot or as tribute. The importance of textile and leather equipment of this sort increased as military operations grew in scale and complexity and fighting far away from home for extended periods of time became more common.

Keywords: arsenal, Athens, clothing, cordage, plunder, tents, Rome, rope, sails, war

Introduction

The array of material items needed for effectively waging war in prehistory and antiquity, even in its simplest form, the raid for plunder, was broader than the weapons and armour that usually capture most if not all academic attention. The individual equipment of soldiers included objects required both for meeting the bare necessities of nutrition, hydration, rest and body protection from the elements (cooking and drinking utensils, shelter supplies, clothing) and for increasing their efficiency in supporting activities such as collection and preservation of supplies, transportation, fortification and engineering (carrying devices, various types of tools, etc.).[1] The longer and more complex military operations grew the larger and more diverse the requirements of armies and fleets for equipment and non-edible supplies became.

Private military leaders, publicly appointed commanders and governments were always faced, to different degrees, with the challenge of provisioning their troops with food, pay and equipment. The ability to extract material resources for supplying and equipping armies was essential for military success and modern researchers stress the intimate connection between the resilience and expansionist dynamics of certain polities, like the Roman Republic, and their unsurpassed capacity to mobilise manpower and economic and financial resources in times of need.[2] Moreover, it is by no means accidental that the Greek and Roman collections of military stratagems, such as those composed by Polyaenus and to a lesser degree, Frontinus, comprise a significant proportion of examples of how to raise money and obtain supplies from one’s own citizens, allies, enemies and neutrals.

Despite the fundamental importance of internal resources and the ability to bring them into play for achieving military goals, capturing and making use of the resources of the enemy, mainly money and food, was a highly desirable and copiously praised way of preserving and enhancing the strength and combat capacity of armed forces. Cato the Elder’s remark *Bellum se ipsum alet*[3] made during the preparation of his campaign in Spain in 195 BC, as he planned to feed his troops exclusively from the crops of Rome’s enemies, became proverbial. The suspension in 167 BC of *tributum* – the citizen tax used for collecting the money paid to the Republican troops under the name of *stipendium* – as a consequence of the enormous booty taken by Aemilius Paulus from Macedonia is another resounding historical event[4] showing the importance that the spoils of war could have had not only for armies but for entire societies.

How frequent and significant was the capture and reuse of non-edible supplies and items of military equipment, except for individual weapons, armour and ships, remains a largely unexplored topic. This statement is all the more true when considering supplies and

[1] See a tentative list in Xen. *Cyr.* 6.2.30-36 (to which tents – mentioned, for example, in 4.2.35, 37 and 5.3.46 – should be added), with Lazenby 1994: 7; Lee 2007: 109-110, 117-123; O’Connor 2021: 230-232.

[2] Tan 2020: esp. 74-75; Rosenstein 2023: 74-77.

[3] Livy 34.9.12.

[4] Cic. *Off.* 2.76; Plin. *HN* 33.17.56; Plut. *Vit. Aem.* 38.1.

items composed of textiles and leather: clothing and footwear, in the first place, but also tents, sails and cordage for ships, hair and ropes for war machines and engineering.[5]

This paper aims to collect, organise and make a preliminary analysis of the evidence for the Greek and Roman practice of amassing and potentially reusing textiles and leather items and supplies connected to war, either from booty or from tributes paid by the enemies for obtaining the avoidance or cessation of hostilities. Most of the evidence is literary, being mainly preserved in historical and biographical works of writers such as Herodotus, Thucydides, Xenophon, Diodorus Siculus, Livy, Appian, Curtius Rufus and Plutarch, and only very rarely complemented by epigraphic material.

The scarcity of the relevant documents should not come as a surprise. The dearth of archaeological evidence is to be expected, given the perishable nature of textiles and leather and the difficulty of proving that the few surviving artefacts were taken from the enemy. Moreover, the written records of booty and tribute hardly pay attention to textile items for the good reason that precious metals, slaves, cattle – and weapons and armour, when camps, arsenals and baggage trains are looted – are in the limelight. The few references to seized textiles are often the results of the activity of over-scrupulous scribes, whose records were then taken over by no less rigorous ancient historians. Alternatively, they are preserved owing to the uniqueness of the captured items, due to their economic value and exquisite craftsmanship[6] or their connection with famous historical figures.[7] Occasionally, such mentions occur when the capture causes or results in an unusual event.[8] This situation leads to a revealing quantitative remark: most of the mentions of textiles taken as booty or received as tribute, roughly 90% of the entries in the database that I have been able to compile so far, with around 250 entries from all over the Mediterranean, between *c.* 1600 and 31 BC, deal with expensive clothes, carpets and curtains, luxury items most often described as πολυτελεῖς, περικαλλεῖς or *pretiosae*.[9] On the other hand, textiles and leather items for military or common civilian use are seldom mentioned. Rarely, some pieces of clothing, although very expensive and exquisite, particularly the cloaks of generals captured in the field, could be classified as military textiles, although it is difficult to avoid thinking of them as prestige and symbolic items.

War, booty and tribute in Greek and Roman antiquity

Before discussing each category of items, some preliminary conceptual remarks about war, booty and tribute in the Greek and Roman societies and generally in pre-modern societies should be made.

First and foremost, the Greeks and Romans always saw war as having an immediate important economic dimension: in Aristotle's words, 'even the art of war will by nature be in a manner an art of acquisition'.[10] From the petty private raids of the Early Iron Age to the large-scale wars of the Late Republican period, both common soldiers and generals expected material gains from their participation in war. Contrary to modern societies where pillage – looting for personal gain of enemy property, whether it be public or private – is strictly prohibited by international law and considered a war crime,[11] private gain from plundering was always considered a legitimate goal[12] and even an honourable means of increasing one's wealth and elevating one's status at home.

Such a conception perfectly suited the most common form of warfare throughout the first half of the 1st millennium BC, predatory warfare, defined as 'private, unprovoked raiding abroad for the sake of plunder'.[13] It took place in communities where the public authority of the state was either non-existent yet or embryonic and warbands led by aristocrats had the almost unhindered freedom of raiding abroad on their own will: the more successful in their raids, the more authority they held in their own community. A Homeric passage splendidly describes the intimate connection between military operations of this sort and the pursuit of material gain: 'but labour in the field was never to my liking, nor the care of a household, which rears goodly children, but oared ships were ever dear to me, and wars, and polished spears, and arrows … I had nine times led warriors and swift-faring ships against foreign folk, and great spoil had ever fallen to my hands. Of this I would choose what pleased my mind, and much I afterwards obtained by lot. Thus my house straightway grew rich,

[5] Other textile items are excluded from the analysis as they either fall under the category of armour (the linen corselets) or their function is exclusively symbolic (standards).

[6] E.g. the marvellous *himation* dedicated in the temple of Hera Lacinia at Croton, plundered by Dionysius I of Syracuse and sold to the Carthaginians for 120 talents of silver (*Mir. ausc.* 96 838a; Ath. 12.541 a-b).

[7] E.g. the *chlamys* of Alexander the Great, plunder taken by Pompey from Mithridates VI, who captured it himself in Cos, where it was deposited for safekeeping by Cleopatra III (App. *Mith.* 117).

[8] E.g. the mercenary captain Aeneas of Stymphalus, trying to capture a fine robe from a Taochian who sought to throw himself down the cliffs, was dragged along after the latter (Xen. *An.* 4.7.13-14); the mutinous soldiers of Mithridates VI killed Dorylaus the general to strip him of his purple robe (Plut. *Vit. Luc.* 17.3).

[9] A general presentation of textiles taken as booty or paid as tribute mainly focused on the luxury items seized by victorious armies and states is available in Iancu forthcoming.

[10] Arist. *Pol.* 1256b.

[11] Dinstein 2004: 213-219.

[12] E.g. Xen. *Cyr.* 7.4.73: 'it is a law established for all time among all men that when a city is taken in war, the persons and the property of the inhabitants thereof belong to the captors'.

[13] Van Wees 1992: 207-217, esp. 217. See also Taylor 2023: 200.

and thereafter I became one feared and honoured among the Cretans.'[14]

Occasionally, the same communities that produced these predatory warbands and their raids (and eventually the nascent city-states) were involved in their entirety in status warfare. The wars of this kind were frequently triggered by private disputes about status or small border conflicts where they fiercely competed for supremacy. Although most often these wars fought for a few weeks during the summer just a handful to several dozen kilometres away from home ended in the low scale ravaging of the enemies' territory or in pitched battles between phalanxes of militiamen with a relatively small amount of casualties, sometimes they led up to the absolute destruction of the opposing community.[15] Much as in predatory warfare, plundering was common and legitimate, as shown by another Homeric passage: 'nay, they that were the first to work violence in defiance of their oaths, their tender flesh of a surety shall vultures devour, and we shall bear away in our ships their dear wives and little children, when we shall have taken their citadel.'[16]

Hegemonic warfare[17] was the latest development of the first half of the 1st millennium BC, encompassing a category of wars much more familiar to modern audiences, but by no means totally superseding the other previous forms of warfare. These wars were fought starting from the second half of the 6th century BC in Greece[18] and the late 5th century BC at Rome[19] by states where formal institutionalised power began to overcome the private authority wielded by aristocratic military leaders. The main goals of hegemonic wars were strategic and the competition for status between polities was internationalised, surpassing by far the limited scale of the usually bilateral confrontations that characterise status warfare. The means for waging war were far more developed, both technologically and quantitatively, requiring the establishment of greatly improved taxation, as the campaigns were undertaken even hundreds of kilometres away from home, sometimes for several years in a row. Quite rapidly in the second half of the 1st millennium BC, wars of this kind started being fought by large leagues (e.g. the Delian League, the Peloponnesian League, the Samnite Confederation, Rome and its allies), great ethnic states (e.g. Macedonia) and empires (e.g. the kingdoms of the Successors), while ordinary city-states were no longer able to meet the demands of hegemonic warfare.

The immediate private gain of the men joining the armies got lower on the list of priority objectives but was by no means unimportant. Good prospects for plunder were essential when young men pondered whether or not to volunteer for enlistment,[20] whereas even the best disciplined Macedonian and Roman troops turned into disobedient mobs that were even prone to infighting when the opportunity to pillage extremely rich cities like Persepolis and Carthage presented itself.[21]

However, the extraction of wealth from the vanquished became more formally institutionalised and complex, both morphologically and chronologically. For example, in Rome, pillaging was organised by the generals and officers; most, if not all of the plundered wealth came, at least theoretically, under the ownership of the state; restrictions on the type of property that could be pillaged were imposed.[22] Plunder started being not only a means of enrichment but as well a significant source for the replenishment of the army and for overcoming logistical adversities. Nonetheless, even more outstanding was the introduction of forms of extraction of wealth that did not entail the direct use of force, but the implicit or explicit threat of it, either before a potential armed clash or, more often, after an actual battle or series of battles that led to the acknowledgement of a clear hierarchy of force between the belligerents. From the exactions made under the threat of force by extremely superior armies or navies as they approached weaker communities[23] and the

[14] Hom. *Od.* 14.222-225, 230-234, transl. A.T. Murray.

[15] My understanding of status warfare is based on an admixture of ideas expressed mainly in Van Wees 1992: 167-207, esp. 206-207, but also in Hanson 1989: 29-37 and Connor 1988: esp. 9-18.

[16] Hom. *Il.* 4.236-239, transl. A.T. Murray.

[17] The expression and much of its meaning are taken from Van Wees 2010: 215-217.

[18] Van Wees 2010: 215.

[19] According to Cornell 1995: 310, 'the wars between Rome and Veii in the fifth century were organised conflicts between developed states, and had complex economic and political causes; and the two sides had long-term objectives that went beyond the mere acquisition of booty - although raiding naturally went on during the course of the fighting'. As per Armstrong 2016: 216, 'the late fifth century saw Rome break this [strategic] stalemate by means of a series of dramatic conquests, including the capture of settlements like Fidenae and Bolae, in addition to Rome's early rival, Veii. These conquests were the result of prolonged periods of conflict, and in many ways represented a continuation and escalation of previous military activity. However, Rome's actions after the conquest of settlements began to change'. I agree with these opinions and consider that the wars against Veii in the later part of the 5th century BC were the first truly hegemonic conflicts fought by Rome, even though the great expansion of the Republic and the generalization of protracted warfare started only later, after 343 BC, as argued in Rich 1993, 38; Cornell 1995: 345; Armstrong 2016: 288-289, etc.

[20] Enthusiastic volunteering for wars expected to bring much booty (or enthusiastic voting for declarations of war): Polyb. 1.11.2 (264 BC, the First Punic War); Livy 42.32.6 (171 BC, the Third Macedonian War); App. *Pun*. 75 (149 BC, the Third Punic War). Reluctance of conscripts to go to hard and unprofitable wars like those in Spain that produced poor booty (Plin. *HN* 33.50.141; App. *Hisp.* 54): Polyb. 35.4.1-7; App. *Hisp.* 49; Livy *Per.* 48.17 (151 BC). See also Harris 1979: 58-60, 63, 74-77 and esp. 102-103.

[21] Diod. Sic. 17.70; Curt. 6.5.4-8; App. *Pun.* 127. See also Livy 37.32.1-12 (190 BC, Phocaea), 38.23.24 (189 BC, Mount Olympus), 38.27.3-5 (189 BC, Mount Magaba) etc., with Ziółkowski 1993, and Plut. *Vit. Arat.* 31-32, with Chaniotis 2005: 133.

[22] See Nicolet 1980: 117 and Rich 2023: 220-226 for Republican Rome. Somewhat similar formal developments took place in Classical Greece, too, as shown in Pritchett 1971-1991: I, 85-92, and in the Hellenistic kingdoms, as noted in Chaniotis 2005: 133.

[23] E.g. Hdt. 8.111-112: 480 BC, Themistocles exacted money from

indemnities demanded from recently defeated foes to the more or less permanent tributes or the *ad hoc* levies requested by the hegemons of leagues or leaders of empires, all these means can be accounted as important techniques of using potential future violence – deemed by the enemies to be irresistible or resistible at much damaging costs – to extract wealth.[24]

Clothing

The short duration of the raids conducted by warbands and the small-scale clashes between neighbouring communities during summertime meant that the practical need to renew the soldiers' existing stock of clothes was low, both in Greece and in Italy during most of the first half of the millennium BC. Capture of garments to be reused by the victors during the same campaign out of sheer military necessity is not documented, as far as I know. Seizing rich apparel was however a legitimate and cherished goal for warriors,[25] although precious metals – either as bullion, coined money, or objects of high craftsmanship –, slaves and cattle were probably better prized as they are more often mentioned in sources. Particularly the seizure of the storerooms (*thalamoi*) in the town houses of the rich aristocrats, where garments were stockpiled along with weapons, precious objects, gold, iron, copper, wine and fragrant oils[26] would have led to great captures of precious clothing. More common clothing might have also been seized, as apparently there were stocks of such items, too, employed for the provision of hospitality gifts to travellers and beggars.[27] Thus, it cannot be excluded that looted clothes during raids or sack of cities were afterward employed in military contexts by their captors, either members of the elites or common soldiers.

A particular case of seizing clothing from the enemy was the despoilment of opponents fallen in battle.[28] Most of the instances of despoilment preserved in the literary sources for the period of predatory and status warfare deal with heroic duels between champions of the opposing armies. Unfortunately, it is not clear if the despoilment was aimed only at the weapons, armour and precious metal ornaments of the fallen warriors or also at the enemy's clothing, as most of the accounts of such events render the stripped goods in rather general terms, such as the Homeric *teuchea* ('implements of war').[29] In most situations any existing supplementary details show that the weapons and armour are the most important, if not the only items taken from the dead enemies.[30] On the other hand, in one instance, Agamemnon is specifically depicted as leaving two victims 'with gleaming chests, since he stripped off their tunics' (*chitōnes*).[31] Moreover, the corpse is described as *gymnos* in a few places throughout the epic: that the term may be translated as 'naked' rather than 'unarmed', is hinted by one reference where new garments for clothing the presumably bare body of Hector are mentioned.[32] The common understanding in the Archaic period that Hector was stripped totally naked is shown by representations on figured vases (Figure 1).[33] Patroclus' corpse, too, when not rendered fully armoured, is represented naked.[34]

Carystos and Paros, threatening their citizens that he would besiege them as he was doing in Andros. It was the beginning of a widespread practice undertaken by the Athenian fleet in the 5th century BC, as shown by Thuc. 2.69, 3.19, 4.50.1, 4.75 (with Kallet-Marx 1993: 136-138, 160-164), 8.76.4, 108.2; Xen. *Hell.* 1.1.12 etc. See also Van Wees 2004: 26-27.

[24] The difference between these forms of extraction of wealth and proper taxation is that in the latter case, some more services are provided by the recipient of wealth than the mere abstention from inflicting damage on the donor (and occasionally in the case of permanent tributes and *ad hoc* levies, the protection against violence perpetrated by third parties). Such services could have been the permission to trade on the territories controlled by the recipient, to participate in the benefits of later conquests, to use infrastructure built by the recipient, etc.

[25] As shown by various instances, both in epic and historical narratives: Hom. *Il.* 24.228-231 (Priam uses costly garments for ransoming the corpse of Hector), Hdt. 5.49.4 (Aristagoras of Miletus tries to convince Cleomenes I of Sparta to join the war against the Persians by mentioning the riches of Asia, including 'coloured garments', 499 BC), Paus. 10.1.6-7 (the Phocians prepare to burn all their riches, including clothing, to deprive the Thessalians of seizing them, ca. 495 BC). The capture and the request of costly clothing was already practiced on a large scale in the Near East, e.g. *RIMA* 3 A.0.102.1 92b'-95' (Shalmaneser III receives tribute from Syro-Hittite states, 857 BC), Joshua 7:21 (Achan covets part of the plunder from the sack of Jericho including 'a beautiful robe from Babylonia', probably a reflection of the society of Judah in the second half of the 7th century BC).

[26] Iancu 2020: 518-519.

[27] E.g. Hom. *Od.* 8.438-442, 10.542, 13.67-69, 23.155 etc. Despite the absence of direct proof, it is probable that later on, large stocks of ordinary clothes could have also been stored – and plundered – in towers and farmhouses in the countryside like those mentioned as targets for raiding in Xen. *An.* 7.8.9-22 and *Hell.* 2.4.2-4, 2.4.26, 6.2.5-6, 6.5.27.

[28] The distinction between booty plundered from living people and spoils from dead enemies is reflected in language, both in Greek (*laphyra* vs. *skyla*) and in Latin (*praeda* vs. *spolia*), see Pritchett 1971-1991: III, 277.

[29] For examples, see Pritchett 1971-1991: III, 277-278.

[30] E.g. Hom. *Il.* 21.179-183, 23.560-562, 23.807-808, 23.824-825 (Achilles shares as prizes out of the equipment he stripped from Asteropaeus the latter's shield and sword).

[31] Hom. *Il.* 11.99-100.

[32] Hom. *Il.* 17.122-121, 17.692-69, 18.20-21 (all inconclusive, referring to Patroclus' corpse); 22.508-511 (Andromache bewails that Hector's corpse lies naked in the Achaean camp, although plenty of garments awaits him in his own halls; additional support for this interpretation in *Il.* 23.184-191, 24.14-21, 24.411-423, 24.580-585). However, *gymnos* obviously means 'unarmed' in contexts not related to corpses: *Il.* 16.813-815; 17.711, 21.49-52; 22.123-125. The Spartan lyric poet Tyrtaeus (fr. 10.21-27 West) provides evidence for naked bodies of fallen warriors, too, that might corroborate the picture from the Iliad, unless nudity was related to certain undocumented fighting practices (cf. Brouwers 2009-2010: 117, n. 47).

[33] E.g. Boston, Museum of Fine Arts 63473 (*c.* 520 BC); British Museum 1899,0721.3 (520-510 BC); British Museum 1842,0314.2 (520-500 BC); München Antikensammlungen 1719 (*c.* 500 BC); New York, Metropolitan Museum of Art 25.70.2 (*c.* 500 BC); Louvre CA 601 (*c.* 490 BC) etc.

[34] Fully naked: Athens Agora Museum AP1044; Athens National Archaeological Museum 26746; possibly Mougins Museum of Classical Art 59; Fully armoured: München Antikensammlungen 1408.

Figure 1: Hector's naked body dragged behind the chariot of Achilles. Attic white-ground *lēkythos*, attributed to Diosphos painter, *c.* 490 BC. Paris, Musée du Louvre CA 601 (photograph: Bibi Saint-Pol and Aisha Abdel via Wikimedia Commons).

More detailed but less reliable evidence is related to archaic Rome. Livy depicts Publius Horatius returning from battle wearing on his shoulders the military cloak of one of the three Curiatii he had slain in the duel opposing three Roman to three Alban brothers.[35] Notwithstanding the extensive literary elaboration of the story, it is highly plausible that Roman aristocrats removed both the weapons and the clothes from the enemies they killed in combat. The return of elite warriors from battle, carrying the exquisite blood-splattered tunics and belts of their fallen opponents, likely for dedicating them in sanctuaries, was a popular theme depicted on fourth-century BC tombs and vases from Campania and Lucania, in communities that still cherished the old aristocratic ways of proving one's military prowess by displaying the spoils won in war.[36] The well-known fresco from the François Tomb at Vulci dated in the last quarter of the 4th century BC that illustrates a scene of the 6th century BC in which the brothers Caelius and Aulus Vibenna, Mastarna and their companions evade from captivity and slay their enemies, including a certain Gnaeus Tarquinius of Rome (Figure 2), shows that prisoners of war, too, were stripped naked by their conquerors.[37] It should also be noted that archaeologically documented parallels from Northern Europe during the Roman Iron Age (AD 0-400) imply that fallen foes were at least partly stripped.[38]

Without resorting to the unsafe method of drawing inferences for archaic Greek and Roman times from accounts dealing with later events, we can hypothesise that the fate of the fallen warriors' clothing depended on the value and suitability of the clothes themselves, the need for clothing of the victorious fighters and the damage incurred by the garments during combat. Precious attire worn by military leaders and wealthy combatants, in particular rich mantles or cloaks, was always worth capturing and, if not severely damaged, reused by the victors. Less valuable apparel – especially that which was damaged – probably stayed on the corpse.

Sources remain significantly unclear about the stripping of the dead[39] even in later periods when they depict more hegemonic conflicts and the way of fighting decidedly shifts from heroic duels to clashes between massed formations of soldiers. However, a particular piece of information in Xenophon's *Hellenica*

[35] Livy 1.26.2 (*super umeros ... paludamento*). See also Verg. *Aen.* 10.495-505 and 12.941-953 for the baldric captured by Turnus from Pallas and worn during the battle against Aeneas.
[36] See Carroll, in this volume.
[37] On the interpretation of the scene, see Cornell 1995: 137-138.
[38] Möller-Wiering 2008: 133.
[39] The references in the ancient authors to the capture of arms and armours in Classical Greece, as well as the weapons dedicated in sanctuaries that can be reliably interpreted as being part of booty based on their inscriptions, are listed in Pritchett 1971-1991: III, 285-292.

Figure 2: The main part of the scene of the liberation of Caelius Vibenna, Mastarna and their companions. Fresco in the François Tomb, Vulci, late 4th century BC (photograph: Waterborough via Wikimedia Commons).

may indicate that in Classical Greece despoiling fallen enemies typically involved removing their tunics. According to Xenophon, after the battle of Munychia of 404/403 BC, the Athenian democrats stripped the dead of the oligarchic party of their arms, but 'did not strip the tunic of any of the citizens',[40] implying that the general Hellenic custom was to take the clothes away from the corpses.[41] In the *Republic*, Plato advised against stripping the Greek dead of anything save their weapons, probably referring to apparel, too.[42] Although Latin sources are even less eloquent on this issue, the vividness of some descriptions of the battlefields after the end of proper fighting[43] suggests that despoilment was systematic and, apart from weapons and armour, which stand in the focus,[44] clothing was carried away as well. Different factors could have led though to excluding garments from the objectives of despoilment. Thus, the great number and wealth of the Persians killed at Plataea allegedly led the helots who were tasked with stripping the dead to ignore even the fine attire and focus only on golden armlets, torques and short swords.[45]

It is even more problematic whether the despoiled garb was afterward used in war by the victors. Whereas some clothes were dedicated in sanctuaries together with the arms and armour of the deceased[46] and other garments could have been employed in civilian settings, it is presumable that appropriate dress recovered from the fallen enemies was worn by soldiers in military campaigns. Certainly, this situation only occurred when the captured clothes were still good enough to be worn or could be of some use for undertaking stratagems.[47]

[40] Xen. *Hell.* 2.4.19. The language employed by Xenophon seems to imply that among the dead there were people who were not Athenian citizens and were stripped of their tunics.

[41] Vaughn 1991: 47, 61, n. 23.

[42] Pl. *Rep.* 469c-e. According to Plut. *Apophth. Lac.* 228e-229a and Ael. *VH* 6.6., the Spartans were also prohibited by their laws to strip the dead enemies, given the military risks entailed by this operation and the negative effects of the spoils against the Lacedemonian ideology. See also Pritchett 1971-1991: III, 292-293.

[43] E.g. Livy 22.51.5-8 (216 BC, the Carthaginians after Cannae), Tac. *Hist.* 3.25 (AD 69, the army of Vespasian at Cremona).

[44] Rawson 1990.

[45] Hdt. 9.80. A similar situation, though without any mention of clothing, occurred after the victory won by Timoleon against the Carthaginians at the Crimisus river in 339 BC, see Plut. *Tim.* 29.1-2. Nonetheless, another tradition about the aftermath of Plataea, recorded in Plut. *Apophth. Lac.* 230e, contradicts Herodotus' account of the disregard for the costly raiment and it is quite probable that he slightly altered the facts through this literary device to overemphasise the might of the utterly defeated Persian army and to give more weight to an Athenian slander against the Aeginetans. See more in Iancu 2024.

[46] Aesch. *Sept.* 273-279: Eteocles vows to dedicate the spear-pierced garments of the enemies in temples. Archaeological finds in the bogs of Northern Europe examined in Möller-Wiering 2008 show that clothing presumably captured as booty was consecrated to deities, cut to pieces and deposited in sacred lakes, together with weapons and objects of precious metals, confirming the overall picture of such practices carried out by Celtic and Germanic tribes drawn from literary accounts such as Oros. 5.16, Str. 4.1.13, Just. *Epit*. 32.3, Caes. *BGall.* 6.17.3-5.

[47] E.g. Diod. Sic. 11.61.1-2: after the naval battle of Eurymedon, *c.* 466 BC, Cimon dressed his best men with captured Persian clothing and thus took the camp of the Persian land army by surprise. See other similar stratagems collected by Polyaenus – 3.9.58 and 59 (Iphicrates against the Lacedemonians, in Chios, and against the Persians, on

Garments that suffered too much damage, like the purple tunic worn over the corselet by the Persian general Masistius at Plataea, who perished hit many times by Greek weaponry, should have been discarded.[48] The Roman generals frequently ordered sacrifices to be made by setting fire to those spoils – probably including clothing – deemed unworthy to be reused or paraded in triumphs[49] and similar disposal of the worthless booty was carried out by the Hellenistic armies, without the religious significance that the Romans attributed to such undertakings.[50]

On the other hand, the valuable and distinctive garments captured from generals and kings always held great symbolic significance, even when their owners were not killed in battle. The Egyptians were delighted to display Caesar's cloak as a trophy when he abandoned it to save his life by swimming away during one of the skirmishes that took place in Alexandria in 47 BC.[51] The robes and the sword of Cassius, brought to Antony by the former's servant after he had committed suicide during the first clash at Philippi, on 3 October 42 BC, were so important a token of the death of the most able Republican general, that they allegedly convinced Antony and Octavius to offer battle the following morning.[52]

Clothing captured from enemies other than generals and kings could also be highly valuable. Anecdotes meant to emphasise the superiority of Greek soldiers over their purportedly effeminate Persian foes suggest that the sumptuous garments of the barbarian prisoners of war – presumably both military troops and civilians – were sold at high prices.[53] Provisions for the capitulation of cities under truce allowing the inhabitants to leave unharmed only with one or two suits of clothes each, such as at Potidaea in 430/429 BC,[54] demonstrate that the other garments which they left behind were valuable for the besiegers who either sold or reused them.

During the latter part of the 1st millennium BC, the increased occurrence of large hegemonic wars which were fought for longer time in distant theatres of operations meant that the soldiers' need to replace their garments during campaigns grew significantly.[55] Ancient historians record telling instances when Greek and Roman armies fighting abroad, in areas such as Propontis and Ionia, during the Peloponnesian War, or Spain and Africa, during the Second Punic War, lacked proper clothing and occasionally openly complained about it.[56] Sometimes the soldiers' fear of succumbing to harsh weather made them unwilling to wear all their personal garments and prone to preserve some for later.[57]

Unfortunately, the direct and undisputable evidence of how Classical and Hellenistic Greek states handled the problem of provisioning with garments their troops in the field is almost non-existent. We only get glimpses of a picture that shows much hazard and improvisation in the case of the armies of the Classical *poleis*. For instance, the Peloponnesians who had suffered defeat at Cyzicus in 410 BC were equipped with cloaks by their ally, the Persian satrap Pharnabazus.[58] Four years later, after the debacle at Arginusae, the Peloponnesians found themselves again in a desperate situation, 'without food and poorly clad and unshod,' so they conspired to prey on their allies, the Chians, to find relief.[59] When the Ten Thousand approached the border between the land of the Carduchians and Armenia in 401 BC, local people hid what looked like bags of clothes.[60] It is therefore highly likely that as troops stayed longer in the field and farther from their main bases, particularly in the late 5th and the 4th centuries BC,

another occasion), 3.14.1 (Charidemus against Ilium), 7.11.6 (Darius I against the Sacae) – and Frontinus – *Str.* 3.2.9 (Antiochus I against Suenda in Cappadocia), 3.2.11 (Timarchus the Aetolian against Ptolemy Ceraunos). The reliability of such stratagems is questionable; see e.g. Meyer 1899: 7-14, concerning the full description of the battle of Eurymedon.

[48] Hdt. 9.22.2, 9.25.1; Paus. 1.27.1.

[49] Plut. *Vit. Mar.* 22.1-3: in 101 BC, the spoils and arms not worthy of being paraded in Marius' triumph were sacrificed on a huge pyre. Earlier instances of this custom: Livy 1.37.5 (Tarquinius Priscus dedicated arms captured from the Sabines to Vulcan), 8.1.6 (341 BC, Gaius Plautius Venox set on fire arms captured from the Antiates, dedicating them to Lua Mater), 10.29.18 (295 BC, Quintus Fabius Maximus Rullianus burnt all the spoils taken from the Samnites and Gauls at Sentinum as a sacrifice to Iupiter Victor), 45.33.1 (167 BC, Lucius Aemilius Paulus disposed of the plunder in excess he took from Macedonia by sacrificing it on a pyre to Mars, Minerva and Lua Mater), 38.23.10 (189 BC, Gnaeus Manlius Vulso burnt the Galatian weapons captured on Mount Olympus); App. *Hisp.* 57 (153 BC, Lucius Mummius dedicated to the gods of war and burnt the booty taken from the Lusitanians that his soldiers were not able to carry away).

[50] Polyb. 5.8.8-9: in 218 BC, the less valuable and portable spoils and arms plundered at Aetolian Thermus were burnt by the Macedonians.

[51] App. *BC* 90.

[52] Plut. *Vit. Brut.* 45.2. See also Plut. *Vit. Pyrrh.* 17.1-2 and Dion. Hal. 19.12.6 (the helmet and cloak of Pyrrhus, worn by his companion, Megacles, are captured by a certain Dexous in the battle of Heraclea in 280 BC and brought with much pride to the Roman consul Publius Valerius Laevinus).

[53] Plut. *Vit. Cim.* 9.3; Plut. *Vit. Ages.* 9.5 = *Apophth. Lac.* 209c and Polyaenus, *Strat.* 2.1.6.

[54] Thuc. 2.70.2-3, with a hint that the garments left behind could have been useful for the besiegers as they were 'already afflicted by lying in that cold place'. See also Polyb. 16.30.7 (200 BC, Abydos).

[55] Notwithstanding the few cases listed below showing that in the context of protracted hegemonic wars lack of clothing became an issue that was unheard of before them, it is challenging to assess the actual replacement rate of garments and footwear for the troops. Largely insecure assumptions on the durability of clothing could be drawn from comparisons with recorded replacement rates for other social and professional groups (e.g. Cato, *Agr.* 59, for slaves: a tunic, a blanket and a pair of wooden shoes every other year). The need for clothing adapted to different seasons and climates (cf. Polyb. 3.49.11-12) further complicates the issue.

[56] Xen. *Hell.* 1.1.24, 2.1.1; Livy 23.48.5, 26.2.4, 29.36.2. See also Polyaenus, *Strat.* 3.9.34; Diod. Sic. 17.94.2; Curt. 9.3.10.

[57] Polyaenus, *Strat.* 3.13.2. See also Xen. *Cyr.* 6.2.30 and *Hell.* 4.5.4.

[58] Xen. *Hell.* 1.1.24.

[59] Xen. *Hell.* 2.1.1.

[60] Xen. *An.* 4.3.11, with Erdkamp 1998: 139, n. 52.

their commanders had to improvise creative ways to supply their troops with clothing, just as with food and pay, resorting to plundering foes and friends alike or to voluntary contributions of allies.[61] Despite significant improvements in logistics,[62] it can be surmised that the large hegemonic wars between the Hellenistic great powers of the Eastern Mediterranean also caused trouble for the troops who waged war for a long time far away from secure operational bases. Nonetheless, literary sources remain largely silent on this matter.

We are in a better position regarding the Middle and Late Republican Roman army, a topic that I dealt with in detail elsewhere.[63] Starting with the Samnite wars, when the Roman military forces undertook for the first time demanding campaigns relatively far from their home, the Republic was compelled to develop methods of furnishing clothing to the troops. During the wars for the hegemony over Italy, booty or the indemnities imposed on the vanquished foes seeking truces (*indutiae*) were the means employed by the Roman generals not only for addressing the pressing issue of pay and food, but clothing as well.[64] Possibly the war against Pyrrhus and certainly the strenuous Punic wars which brought the Roman troops overseas led to the development of more sophisticated ways of acquisition of the clothing required by the army. Indemnities never ceased to be asked, particularly in remote areas of Spain,[65] but public acquisition contracts,[66] more or less voluntary allied contributions[67] and *ad hoc* levies on the recently conquered provinces became frequent.[68] Supporting Roman garrisons and billeting of troops seems to have been accompanied by the onerous obligation for the hosts to provide garments also.[69] It is evident that booty and, more crucially, different forms of tribute imposed on defeated foes and subjects, sometimes even on allies, were key to the provisioning of the Roman troops with garments when conducting operations far from their home. Rome's ability to extract resources from the people she conquered appears to have been essential for the development of its hegemony over the Mediterranean.

Tents

The seizure of the enemy camp was one of the potential outcomes of battle in antiquity, particularly in hegemonic confrontations. Thus, when the victors did not just set fire to the whole encampment[70] or plunder exclusively the precious items and the supplies,[71] they captured the tents of the opponents, which were valuable assets[72] regardless of the material they were made of: textile fabrics or leather.[73]

Unfortunately, as in the case of clothing, the literary sources provide specific information about what happened to captured tents only in exceptional cases involving the rich pavilions of kings and generals, for example, Mardonius' tent, seized by the Greeks after

[61] The phenomenon is best recorded in connection with the Athenian generals of the 4th century BC, such as Iphicrates, Chabrias, Chares, Timotheus and Charidemus, see Pritchett 1971-1991: I, 89-90, II, 101-104; Trundle 2004: 152; Bettalli 2013: 101.

[62] For the changes in logistics introduced through the military reforms of Philip II and Alexander, see Engels 1978: 22-24, 119-120.

[63] Iancu 2025.

[64] Livy 7.37.2 (343 BC, Samnium), 8.36.11-12 (324 BC, Samnium), 9.41.8 (308 BC, Etruria), 9.43.6 (306 BC, the Hernici), 9.43.21 (306 BC, Samnium), 10.30.10 (295 BC, triumph after the battle of Sentinum), 10.37.4.5 (294 BC, Volsinii, Perusia and Arretium, in Etruria). Whereas the earlier instances are highly doubtful, the events during the last years of the Second and the Third Samnite Wars seem reliable. On *indutiae*, see Oakley 2005: 538-539.

[65] Livy 29.3.5 (205 BC, Illergetes); App. *Hisp.* 54 (151 BC, Intercatia); Diod. Sic. 33.16.1 (143 BC, Numantia and Termes).

[66] Livy 27.10.13 (209 BC, for the troops in Spain), 44.16.1-4 (169 BC, to the army waging war against Macedonia). See also Polyb. 6.15.5.

[67] Voluntary contributions: Livy 21.50.8-10; Diod. Sic. 23.18.1 (throughout the first two Punic wars, Hieron II of Syracuse), Livy 22.52.7 and 54.3-5 (216 BC, a rich woman from Canusium), 22.54.1-2 (216 BC, Venusia). Forced contributions: Plut. *Vit. C. Gracch.* (126 or 125 BC, cities in Sardinia).

[68] Livy 29.36.2 (204 BC, 1200 togas and 12,000 tunics brought to Africa from Sardinia), 30.3.2 (203 BC, unspecified amounts of food and clothing sent to Africa from Sardinia, Sicily and Spain), probably 30.24.5-6 (202 BC, unspecified supplies brought to Africa from Sardinia and Sicily), 32.27.2 (198 BC, a large quantity of provisions and clothing brought to Greece from Sardinia and Sicily).

[69] Perhaps Livy 37.9.1-3 (190 BC, the Phocaeans were required to provide a tribute of 500 tunics and 500 togas for the troops stationed in their city) and Plut. *Vit. C. Gracch.* 2.2-3 (126 or 125 BC, requisitions from the Sardinian cities for the Roman troops who waged war against the local rebels), certainly Plut. *Vit. Sull.* 25.2 (84 BC, the military tribunes stationed in the cities of Asia punished by Sulla for their previous support to Mithridates VI were to receive two suits of clothing from their hosts).

[70] Thuc. 1.49.5 (the Corcyraeans burned the empty tents of the Corinthians but plundered the more valuable stuff); 6.75.2 (the Syracusans set fire to the tents and the camp of the Athenians); Diod. Sic. 14.54.2-3 (the Segestans set ablaze the tents of Dionysius I); Polyb. 3.43.9-10 (the Carthaginians under Hannibal set fire to the tents of the Gauls who denied them the crossing of the Rhone);

[71] Such instances are mostly anecdotal and sometimes refer to ruses leading to temporary access to the enemy camp instead of full-scale victories: Paus. 4.19.2; Str. 11.8.5.

[72] The logistics for producing and transporting tents required quite a lot of effort, so many armies built wooden and wattled shelters instead. E.g. Hom. *Il.* 24.448-456: during the siege of Troy, Achilles was sheltered in a wooden lodge; Polyb. 14.1.6-7: in 203 AD, the Carthaginians and the Numidians built huts made of wood, boughs and reeds (cf. App. *Pun.* 21; Diod. Sic. 20.65.1 certifies a similar situation in 307 BC); Livy 35.27.3: in 192 BC, most soldiers in the army of Nabis of Sparta did not have tents and built instead wattled huts covered by reeds and leafy branches. According to Tac. *Ann.* 1.17, in 14 AD, the revolted Roman troops in Pannonia complained that they had to buy clothing, arms and tents from their *stipendium*. Driel-Murray 2017, 5 demonstrates that no less than 75 goat skins were required for a tent shared by eight Roman soldiers, which explains why 'tents were used and recycled to the utmost'. Precious as they were, tents were by no means indispensable, as shown by the fact that they could be burnt by their owners, for instance, when they needed more mobility, see Xen. *An.* 3.2.27, 3.3.1.

[73] Textile fabrics: Eur. *Ion.* 1132-1165 and probably the etymology of the word 'canvas' itself, ultimately deriving from the Latin *cannabis* and Greek *kannabis*, denoting 'hemp'. Leather: Xen. *An.* 1.5.10; Arr. *Anab.* 1.3; Roman imperial tents, as shown both by literary sources and archaeological finds, e.g. McIntyre and Richmond 1934 and Driel-Murray 2017. The tents of the Sarmatian tribe of the Roxolani were made of felt (Str. 7.3.17). Of course, most tents also needed wooden poles and posts, iron pegs and guy ropes.

the battle of Plataea,[74] the Persian satrap Tiribazus' tent captured by the Ten Thousand,[75] Darius III's tent taken by the Macedonians at Issus[76] and Demetrius Poliorcetes' tents lost in 312 BC, after the battle of Gaza, and in 307 BC, during the siege of Megara.[77] Moreover, the emphasis falls on the silver, gold and the expensive furniture and accoutrements found in the tents and less on the pavilions themselves. On the other hand, we are fortunate enough to be informed that Mardonius' and Darius III's tents were later used by their conquerors, at least in the immediate aftermath of the respective battles. This outcome is by no means surprising given that fully furnished tents were among the customary gifts sent by the Roman Senate to allied generals.[78]

Information about more common tents obtained from the opponents is less frequent and detailed. Eumenes, released from the siege of Nora in 318 BC, received horses, mules and tents as a ransom for the Cappadocian hostages whom he was holding.[79] The tents captured from the Cimbri after the battle of Vercellae of 101 BC, together with their wagons and property, were given to Marius, the overall commander of the Roman legions, by vote of the soldiers.[80] It is frustrating that in most instances, even though it is clear that an army took possession of their opponents' tents,[81] there is no information about what use was made of them.

Consequently, by inference from the preserved evidence, a similar conclusion can be reached as in the case of clothing. When there was no major damage to the captured enemy camps, the exquisite tents of the kings and generals, as well as the other tents seized in good condition were probably preserved and taken for future use. Unnecessary or worn out tents were probably burnt[82] or partially recycled for making or repairing other objects.[83]

Sails and cordage

Evidence is scarce about the versatile undecked long ships used for seaborne plundering raids and small confrontations for status between the communities of the Early Iron Age and Archaic Greece and Italy, such as the *triakontoroi,* with thirty oars, and the more famous *pentēkontoroi*, manned by fifty oarsmen.[84] As with the later and larger triremes, the sail attached to the single mast of these ships was very helpful when cruising over longer distances,[85] even though the force exerted by the rowers was necessary to achieve the higher speeds and perform the manoeuvres required for the military naval operations.[86] For the members of the military elite who ordered and owned these ships, they were substantial investments. More ships brought more prestige and, even more importantly, better conditions for larger profits from plundering abroad. The same warlords provided food and drink for the crews they were able to assemble for conducting their private expeditions. Apparently, they operated similarly in case their communities called them to arms for wars over status, but the expenses they incurred were reimbursed from the public wealth.[87]

Given these social and economic fundaments, even in the absence of explicit information, it is fair to assume that the capture of enemy ships during combat,[88] including their sails and rigging,[89] constituted a considerable benefit for the captors. It is also conceivable that any chance of seizing exclusively sails and cords was appreciated, given the significant amount of work invested in their production,[90] but no other meaningful additional conjecture can be made as we lack any information whatsoever about how the hanging material was manufactured and stored.[91]

[74] Hdt. 9.70.3, 82.
[75] Xen. *An.* 4.4.21.
[76] Arr. *Anab.* 2.12.3; Plut. *Vit. Alex.* 20.6-7; Diod. Sic. 17.35.1-2, 36.4-5; Curt. 3.11.23, 12.3.
[77] Plut. *Vit. Demetr.* 5.3, 9.4.
[78] Livy 30.17.3 (203 BC, to the Numidian king Massinissa); App. *Pun.* 109 (148 BC, to Phameas, a Carthaginian traitor).
[79] Plut. *Vit. Eum.* 12.3.
[80] Plut. *Vit. Mar.* 21.2.
[81] E.g. Plut. *Vit. Arist.* 5.5 and Hdt. 9.80 (the Greeks were amazed by the great wealth found in the Persian tents after Marathon and Plataea); Caes. *BCiv*. 3.96 and Plut. *Vit. Pomp.* 72.4 (Caesar's soldiers found the enemy tents decked for revelry), etc.
[82] Even one's own tents could be burned, if deemed unnecessary, e.g. Xen. *An.* 3.2.27.
[83] Particularly the tents made of leather, see Driel-Murray 2017: 2; Wild 2020: 82.
[84] On the types of ship employed before the introduction of the trireme, see Casson 1971: 43-65 and Wallinga 1992: 33-65, esp. 63-64. Most of the evidence is conveniently collected in Morrison and Williams 1968: 12-165.
[85] E.g. Hom. *Il.* 1.432-435, 1.479-482; *Od.* 2.414-434, 14.252-258.
[86] Spantidaki 2018: 77.
[87] Van Wees 2013: 17-19, 31-32.
[88] E.g. Hdt. 1.66-67.
[89] Both those in actual use and the eventual reserve supplies (as attested in Medieval Scandinavia, see Andersson Strand and Mannering 2021: 33).
[90] There is no direct proof for this assumption, but it can be deduced by some rough estimates derived from comparisons with the amount of labour incurred for the sails of triremes. Assuming a *dikrotos* penteconter 25 m long and 4.5 m wide (Wallinga 1992: 49-51), comparing it with *Olympias*, the modern replica of a fourth-century BC Athenian trireme, approximately 37 m long and 5.5 m wide, equipped with a main sail of 95 m^2 (Morrison and Coates 1986: 223-224), and allowing for the existence of a direct proportion between the size of the ships and the size of the sails, we might infer that the penteconter should have been equipped with a sail of *c.* 52.5 m^2, even though this is most probably an underestimation. Using the figures in Dimova *et al.* 2021: 759-770, the amount of labour would have been *c.* 1890 hours of spinning and 1312 hours of weaving, roughly 400 eight-hour working days.
[91] Certainly, it can be speculated for example that supplies of sailcloth and ropes were stored together with clothing, individual weapons, armour, etc. in the aristocratic *thalamoi* and that whenever such storehouses were captured, they were seized, too. The high value of sails would have certainly rendered appropriate their storage in *thalamoi* and probably also their use as prestige gifts, as attested in the Norse society, see Andersson Strand and Mannering 2021: 44. Nonetheless, there is no proof to sustain such a scenario.

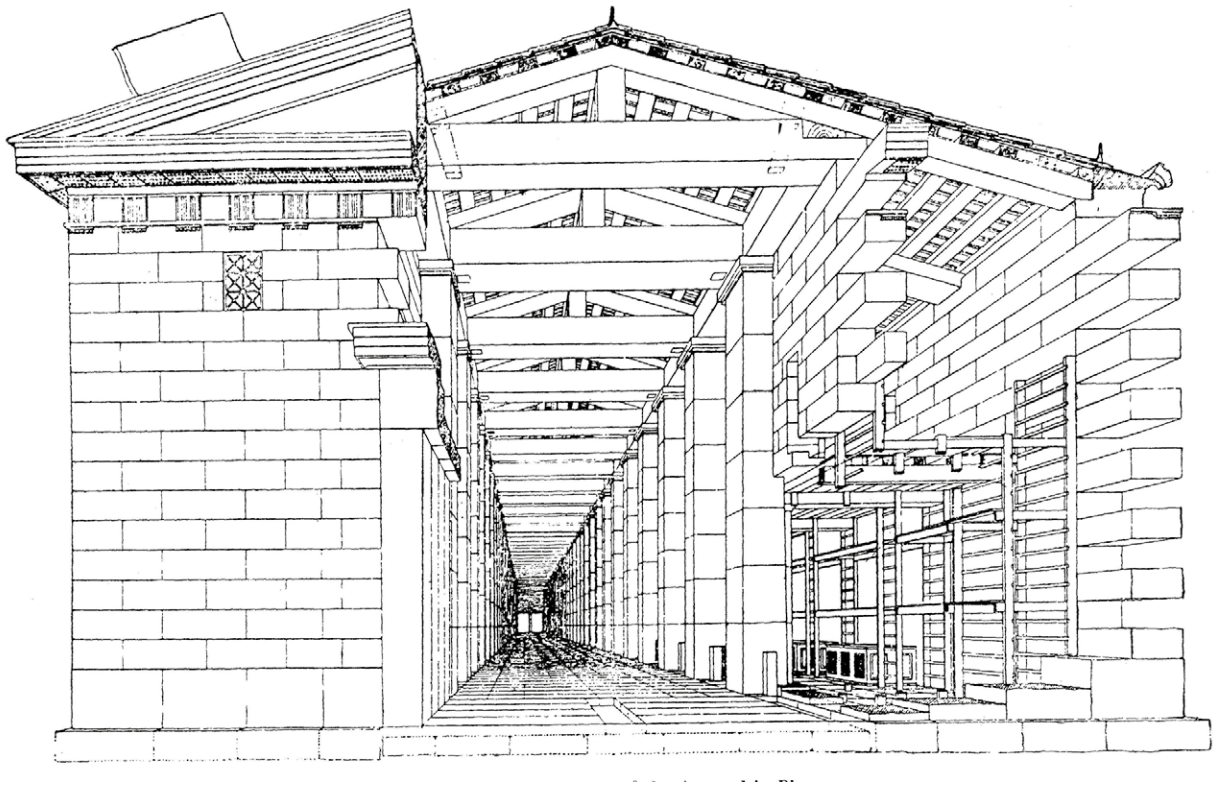

Figure 3: Philo's arsenal in Piraeus. Reconstruction by Vilhelm Marstrand, after the detailed narrative description in *IG* II^2 1668 (drawing: Hovgaard 1926: pl. 3, after Marstrand 1922: pl. 4).

With its 200-strong crew, the trireme was a great technological innovation that led to a significant revolution in naval warfare and enabled the large Greek polities to wage great and protracted hegemonic wars. The revolution took place as well as in the underlying economic and political fundaments of military sea power. From the last quarter of the 6th century BC, the Greek city states developed expensive public fleets and complex administrative systems to oversee them.[92] The costs incurred by the sails and cordage of the large fleets of triremes were unquestionably very high, as pointed out by several indicators, ranging from the modern estimates of the huge amounts of labour required for the production of sails[93] to the shortages recorded in the Athenian naval inventories of the 4th century BC, most probably due to misappropriations by naval officers and trierarchs.[94] Despite contradictory information in the epigraphical record, Boeckh estimated the overall cost for the equipment of a trireme – both 'the hanging gear' (*kremasta skeuē*), consisting of sails, screens made of canvas, hair or leather, ropes for the rigging, ropes for mooring, cables for anchors and for reinforcing the hulls (*hypozōmata*) and 'the wooden gear', which included masts, oars, steering oars, yards, poles, props and ladders – to almost one talent, comparable to the cost of the hull.[95] It should come as no surprise then that in the second half of the 4th century BC, a special storehouse (*skeuothēkē*) designed by the architect Philo was built in Athens for the 'hanging gear' (Figure 3) and that an additional amount of textile equipment for 100 triremes was stored on the Acropolis, in the *Chalkothēkē*.[96] Moreover, linen items such as sails or

[92] Van Wees 2013: 32-37, 63-68, 140-142.

[93] Dimova *et al.* 2021: 769-772, where some other circumstantial evidence for the high price of sails is presented as well, such as the import of the raw materials from Egypt (Hermippus fr. 63 Kassel-Austin).

[94] Boeckh 1840: 203-204; Gabrielsen 1994: 146-157.

[95] Boeckh 1851: I, 155 (followed in Pritchett 1971-1991: V, 473, n. 704), based on figures discussed in detail in Boeckh 1840: 206-208, where extremely variable costs are mentioned for the full gear (triremes: 1084.5 dr., 2169 dr., 2299 dr., 4100 dr.; quadriremes: 4000 dr., 4916.5 dr., one talent, one talent 105.5 dr.) or only for the hanging gear (a trireme: 1610 dr.; quadriremes: 1500 dr., 5150.5 dr. – including the mast). With regard to the cost of individual items of the hanging gear, Boeckh was confident only in the case of the special cables for reinforcing the hull (*hypozōmata*) – c. 475 drachmas. Using the estimate presented in Dimova *et al.* 2021: 769-772 of *c.* 900 eight-hour working days only for spinning and weaving the two sails of a trireme and the wage of 1.5 drachmas/day for an 'unskilled' labourer in the second half of the 4th century BC their cost would have amounted to *c.* 1350 drachmas (without taking into account the cost of the raw materials; on wages in classical Athens, see Loomis 1998: esp. 120). This sum would range between more than half and more than a sixth of the cost for the full equipment of a trireme.

[96] Pritchett 1971-1991: III, 280; Gabrielsen 1994: 148-149; Simonsen 2008: 73-74; Spantidaki 2018: 79. A detailed description of the components of the trireme's gear is made in Morrison and Williams 1968: 289-303.

ropes constituted equipment considered strategically important and valuable enough to be smuggled from Attica to Peloponnesus at the end of the Peloponnesian War.[97]

Accordingly, the capture of sails and cordage as a side consequence of successful military operations was most probably well-appreciated. The capture might have occurred when the ships themselves were seized in sea battles,[98] if there was not time for the main masts and sails to be left ashore prior to confrontations, as had become frequent practice.[99] It could have also taken place by looting the place on the shore where the enemy left his sails in preparation for battle, as Conon and his nine remaining triremes did in 405 BC after the Athenian disaster at Aegospotami, finding and seizing at Abarnis, the promontory of Lampsacus, the sails of Lysander's ships.[100] Sails and cordage were occasionally captured when the arsenals and supply depots where they were stored were seized. For instance, in 413 BC, when the Syracusans took the three forts at Plemmyrium which the Athenian besiegers were using as storehouses, they found sails for forty triremes and possibly other textile and leather naval equipment besides much money and food.[101]

The importance of sails and cordage went far beyond military vessels. An Athenian honorary decree for the Cypriot merchant Heraclides of Salamis shows that even in times of peace the sails of merchant ships could be seized by the military fleets of third parties, although there is no evidence that they were subsequently reused for equipping warships: in 330/329 BC, Heraclides was deprived of his sails by the Heracleans, in Pontus, as he was carrying local grain to Athens, and the Athenians resolved to send an envoy to Heraclea and request the return of the sails to their business partner and benefactor.[102]

The economic requirements for building and maintaining large military fleets increased even more in the Hellenistic period when great empires waged hegemonic wars for huge swathes of the Mediterranean. The storage facilities extended in size[103] and seemingly large workshops specialised in fulfilling the military purchase orders of the state, perhaps along with the smaller requests of merchants, thrived.[104] Frequently, for building new fleets from scratch, the resources of those subjects and allies particularly specialised in the production of certain strategic products had to be mobilised through forced or voluntary contributions: in 325 BC, Alexander the Great ordered the Cypriot kings to provide the copper, tow and sails (*stuppamque et vela*) necessary for a fleet of 700 ships[105] and in 205-204 BC, Scipio, deprived of the Republic's support, built part of his fleet for the invasion of Africa from contributions furnished by allied cities, including sailcloth (*lintea in vela*) from Tarquinii.[106]

However, there are only two preserved instances proving beyond any doubt that naval gear was taken from the enemy and subsequently used by its captor. Both originate in the detailed accounts of the campaigns led by the family of the Scipiones in Spain, of which Polybios had a first-hand acquaintance and which were further preserved in Livy's work. They deal with the seizure of large quantities of *spartum*, a fibre produced from a certain type of grass that constituted the prime resource employed by the Carthaginians to rig their ships, in all likelihood a technological novelty for the Romans. Thus, after the battle of the Ebro River in 217 BC that left the Romans in control of the sea, their fleet was able to plunder several settlements on the coast of Iberia, including the Carthaginian naval base at Longuntica, where Hasdrubal gathered a substantial amount of *spartum* for his ships. 'Of this they took what they needed and burned all the rest', wrote down Livy

[97] Ar. *Ran.* 364.

[98] Besides the many instances of ships captured in battle provided by literary sources, there is also important epigraphic evidence of vessels taken from the enemies and put in use by the Athenian navy, summarised in Pritchett 1971-1991: III, 279. Three of the *Tabulae Curatorum Navalium* (*IG* II^2 1607 l. 44, 1610 l. 23-24, 1613 l. 268-283) specifically mention captured textile equipment for ships (screens of canvas, shrouds, ropes and devices for tightening the swifters).

[99] Casson 1971: 236, n. 54; Morrison and Williams 1968: 298-299.

[100] Xen. *Hell.* 2.1.29. While Conon's deed after the crushing defeat at Aegospotami can be partially explained by his plan to slow down Lysander's triremes and increase his chances to escape, as stated in Casson 1971: 236, n. 54, it is noteworthy that he carried them off rather than setting them on fire. The fact indicates how valuable the sails were.

[101] Thuc. 7.24.2 reports specifically about the sails. Diod. Sic. 13.9.4 and Plut. *Vit. Nic.* 20.2 are more general in their shorter accounts, mentioning only 'naval equipment' (*nautikai skeutai*) and 'much equipment for triremes' (*skeuai triērikōn pollai*). It is unclear whether Diodorus and Plutarch just rephrased Thucydides' more specific information or found additional data in the history of Philistus, which they also followed (cf. Diod. Sic. 13.103.3; Plut. *Vit. Nic.* 1).

[102] *IG* II^3 1367, 36-41.

[103] According to Spantidaki *et al.* 2020: 10-17, in Hellenistic Rhodes there are archaeological remains of large storehouses similar to those in Classical Athens, near the main ports of the city, but no reliable connection with textile sails, screens of canvas and ropes can be made. According to Arr. *Pun.* 96, Carthage also had large magazines for the naval equipment (*triēretika skeuē*) located above the 220 ship sheds of the inner military port, part of which were discovered through archaeological excavations, see e.g. Hurst and Stager 1978. Large storage facilities should have been built in Egypt, too, as besides the alleged fleet of 1500 long ships, the Lagids had also naval equipment for twice as many vessels, if App. *Praef.* 10 is to be trusted. Despite the exaggeration, it is obvious that the Egyptian kings had large stocks of material, as shown by Ptolemy III Euergetes' generous donation of 3000 talents of tow and 3000 pieces of sailcloth to the Rhodians following the devastating earthquake in *c.* 220 BC (Polyb. 5.89.2; for tow as part of the naval supplies, see [Dem.] 47.20).

[104] Dimova *et al.* 2021: 775; Stefanakis *et al.* 2022: 142.

[105] Curt. 10.1.19.

[106] Livy 28.45.13-15. Although Livy implies that the contribution was voluntary, it would not be surprising if Tarquinii was actually forced *ex senatus consulto* to furnish with sails the 30 ships strong fleet, as surmised in Thiel 1946: 145-158, but this side of the matter was obliterated in the pro-Scipionic traditions, as it was frequently the case in the creation of the Scipionic legend, for whom see Walbank 1967.

in one of the very few explicit statements of reuse of looted textiles in military contexts preserved in the ancient sources.[107] Several years later, in 209 BC, when the young Scipio dealt the Carthaginians a severe blow by occupying their operational base at Carthago Nova, he captured a fleet of 63 merchantmen loaded with supplies of grain, arms, bronze, iron and 'linen sails and *spartum* and other naval materials for the building of a fleet' (*linteis et sparto et navali alia materia ad classem*), half-rhetorically and half-practically described by Livy as more important than the city itself.[108]

Even though only in the aforementioned instances we are fortunate enough to get explicit mentions about the phenomenon, it is highly likely that whenever a victorious army took over large *skeuothēkai* that did not sustain significant damage during the operations,[109] the material was carried away for further military use or for being sold. In case such military booty was too large for being carried away in its entirety, as at Longuntica, or of a kind that did not fit the needs of the vanquishers, then the plunder could have been deliberately destroyed. One such recorded occurrence stems from Pompey's victory over the Cilician pirates in 67 BC when the latter gave up their ships and great quantities of weapons, bronze, iron, timber, sailcloth and cordage (*kai othonas kai kalōs*), as well as a multitude of captives. Pompey burned the materials – perhaps performing the traditional Roman sacrifice to the gods?[110] – but carried away the ships and sent the captives back to their home cities.

Hair and ropes for engineering and war machines

The augmentation and diversification of military operations engendered by hegemonic warfare determined a marked increase in the material needs of both navies and land armies. The construction of military infrastructure to facilitate the movement of one's troops and blocking the enemy, as well as the war machines employed both in sieges and pitched battles posed new great challenges for military logistics, as shown by numerous instances, out of which the sieges of Tyre by Alexander in 332 BC and of Athens by Sulla in 87-86 BC are the most illustrative.[111] Incendiary tow attached to missiles,[112] loaded on demolition ships,[113] thrown over siege engines[114] or piled in tunnels dug for undermining fortifications[115], hair for catapult springs,[116] coverings and baskets of wool used for blocking the besiegers and their devices,[117] and most of all ropes and cables with a large range of utilities, from towing and lifting ships and other war devices[118] to turning aside rams[119] are the most important textile materials and items extensively employed by the armies involved in hegemonic warfare.

Large stockpiles of hair and ropes appear to have been prepared, as significant quantities of the former could have been rapidly dispatched to friends and allies when necessary[120] and the latter were reportedly carried on a habitual basis by the servants in the army.[121] Somehow understandably, ancient sources pay even less attention to such trivial materials than they do to ship sails and cordage. As a result, we know very little about their production, acquisition and storage, and much less about their capture in war.

We are better informed about the hair for torsion artillery. An Athenian late fourth-century BC decree honouring the metic Euxenides of Phaselis for donations of sinews,[122] which was the alternative to hair for springs and the primary material for bowstring,[123] shows that these supplies were normally purchased or collected independently of the other parts of the machines, especially since worn springs needed to be replaced.[124] The conclusion is supported by Vegetius' advice to generals 'to collect supplies of sinews with the utmost vigour'[125] and the numerous literary references

[107] Livy 22.20.6: *Quod satis in usum fuit sublato ceterum omne incensum est*.

[108] Livy 26.47.9-10. See also App. *Hisp.* 23.

[109] E.g. App. *Pun.* 127: the Carthaginians put fire to the commercial part of the Inner Port to stall the Roman advance, but the Romans were able to mount the section of the city wall next to the military harbour. It is unclear whether the naval arsenals were burnt or not, but the example shows that such events could happen, depriving the victors of the booty.

[110] See above n. 49.

[111] Tyre: Arr. *Anab.* 2.21.1, Diod. Sic. 17.40.4, 42.6-7; Athens: Plut. *Vit. Sull.* 12.2-3; App. *Mith.* 30.

[112] E.g. Hdt. 8.52; Xen. *Cyr.* 7.5.23; Livy 21.8.14.

[113] App. *Pun.* 99 (boughs and tow), see also Arr. *Anab.* 2.19.1 and Diod. Sic. 20.86.3 for ships loaded only with inflammable wood.

[114] Polyb. 1.45.12, App. *Hann.* 33.

[115] App. *Mith.* 36.

[116] E.g. *IG* II^2 1475, B, ll. 30-35, 1467, B, col. ii, ll. 48-56 and potentially 1487 B II ll. 84-105, with Marsden 1969: 56-57, Rihll 2007: 79 and Meißner 2017: 333. Despite the ancient authors' fascination with the few instances when human hair was used for making springs, horse hair and even more frequently long fibre sheep wool were the main employed materials, impregnated with linseed oil, wax and resin for increasing tensility, see Meißner 2017: 335-337.

[117] Livy 38.7.10 (coverings of goat hair used by the Aetolians at Ambracia to stop the Roman miners, 189 BC); App. *Mith.* 74 (baskets of wool for cushioning the blows of rams at Cyzicus, 72-71 BC), etc.

[118] Polyaenus, *Strat.* 7.21.3; Plut. *Vit. Demetr.* 88.5; Polyb. 1.22.8, 1.26.14 and 1.28.2, 3.46; App. *Pun.* 99; Caes. *BCiv.* 3.40.

[119] Thuc. 2.76.4; App. *Mith.* 74; Veg. *Mil.* 4.23.

[120] Polyb. 4.56.2: the Rhodians sent 300 talents of prepared hair to the Sinopeans who were at war with Mithridates II; 5.89.8-9: Seleucus II sent 1000 talents of hair to Rhodes as a gift after the devastating earthquake of *c.* 220 BC.

[121] Frontin. *Str.* 4.1.6. See also Xen. *Cyr.* 6.2.32, with reference to *himantes*, leather straps, but also cords. According to Lucian *Tim.* 20, ropes as those used for hanging oneself cost only 1 obol.

[122] *IG* II^2 554, ll. 15-16, with Marsden 1969: 70 and Lucas 2022: 141-142, n. 55.

[123] Hero *Belopeica* W110-112 and Ph. *Bel.* 68 (40), with Meißner 2017: 328, 334-335, 337.

[124] Veg. *Mil.* 4.9.

[125] Veg. *Mil.* 4.9: *neruorum quoque copiam summo studio expedit colligi*. Some additional proof might come from the Vindolanda tablets 343 and 596 (ll. I.7-8), mentioning acquisitions of sinews and hair, among other goods. It is unclear whether the supplies were intended for use in artillery devices, see Bowman and Thomas 1996: 304 and Wilkins 1995: 43, n. 96.

to besieged communities that ran out of springs and strings for their war machines and used the women's hair for replacement.[126] Catapults in different working conditions, sometimes lacking the required springs, were stored in the Athenian arsenals of the acropolis and Peiraeus, together with naval equipment, in the last third of the 4th century BC.[127] Based on both epigraphic and literary evidence,[128] it can be inferred that hair and sinews, either raw or twisted into strings, might have been stored separately from the wooden and metal components and thus at least theoretically ancient armies could have independently captured these supplies. Nonetheless, only instances when entire catapults and other war machines were seized are preserved in the extant records dealing with the fall of various cities such as Syracuse, New Carthage and Carthage itself.[129] On the other hand, we are informed about sinews taken by the Cyreans in their retreat up the Tigris valley and used for twining their slings.[130]

There is much less information about ropes in general, therefore we are constantly obliged to cope with assumptions. For example, we may speculate that the vast Carthaginian reserves of *spartum* from Longuntica and Carthago Nova could have been collected not only for the needs of the navy but also for those of the land army and that the Romans employed the captured supplies for both types of necessities.[131] There is however an unquestionable occurrence of cordage captured as booty but which could be better qualified as plunder of prestige items. In 479 BC, the Athenians and their allies occupied the main fortified Persian base in the Propontis at Sestus and captured the cables of papyrus and white flax used for Xerxes' pontoon bridge over the Hellespont which had been deposited there by the Persian notable Oeobazus.[132] According to Herodotus, they carried them away to be dedicated in their temples,[133] as they were 'a trophy that symbolised the full power of the Great King'.[134] Pierre Amandry presents a compelling case that at least some of them were dedicated at the treasury of the Athenians in Delphi along with prows of the captured Persian ships.[135]

Conclusion

The limited scale of predatory and status warfare prevented Greek and Roman warriors from employing, storing and consequently plundering or requesting as tribute large amounts of military textile items. Nonetheless, we can safely infer that enemy apparel, particularly if it was costly and recovered in good condition, was looted and either reused, sold, or dedicated in temples. Similarly, the sails and rigging of the long ships that preceded the triremes, such as the triaconters or penteconters, would have been considered significant spoils by belligerents. Nonetheless, only when hegemonic warfare emerges in Greece and Italy we get reliable information about the capture or the mandatory request of textile items as varied as garments, tents, ship sails, cables and ropes, to be used by the armed forces. Even so, literary sources share information about such captures mostly when there is something highly unusual about them: the Athenian democrats exceptionally refuse to strip bare their fellow citizens after the battle of Munychia, the Romans encounter and capture for the first time large supplies of *spartum* in Iberia, the cables of Xerxes' bridge over the Hellespont were unique given their size, material and workmanship. Epigraphic evidence might record more trivial cases, but they are only a few and lack details. Sometimes, the capture of textile items for military use might be inferred when general descriptions of the seizure of arsenals are added to the narrative accounts.

In the end, it cannot be denied that waging war in ancient Greece and Rome was unthinkable without adequate supplies of garments for soldiers, sails and cordage for ships, ropes and hair for war machines and engineering works, which became even more crucial as military operations grew larger, lengthier and more complex. Notwithstanding the paucity of direct evidence, it is beyond any doubt that war booty and tribute imposed over defeated foes and subjects were convenient – yet insufficient – sources for meeting the needs of campaigning troops and for refilling storerooms and arsenals. Accordingly, textiles of primary and secondary

[126] Polyaen. 8.67 (Thasos, 465-463 BC, certainly not for torsion artillery, possibly for other war machines); Veg. *Mil.* 4.9; Lactant. *Idol. Ven.* 2.10, *Div. inst.* 1.20.27 and Serv. on Verg. *Aen.* 1.720 (Rome, 390 BC, allegedly for artillery); Front. *Str.* 1.7.4 (Massalia and Rhodes, no details); App. *Pun.* 93, Flor. 2.15.10 and Front. *Str.* 1.7.3 (Carthage, 149-146 BC, both for artillery and the navy); Caes. *BCiv.* 3.9 (Salona, 49 BC, for artillery); SHA *Max.* 33.1-2, *Max. et Balb.* 11.3, 16.5 (Aquileia, 238 AD, for artillery). At least some of these instances, most conspicuously the one dealing with the siege of the Capitol in Rome, are clearly propagandistic and literary inventions, see Marsden 1969: 83; Campbell 2011: 679; Meißner 2017, 331.

[127] *IG* II^2 1627, B, ll. 328-341, 1628, D, 510-521, 1629, E, 985-998, 1631, B, 220ff., with Marsden 1969: 56-57.

[128] *IG* II^2 1627, B, ll. 328-341, with Marsden 1969: 60-61, Ph. *Bel.* 61 (27).

[129] Livy 26.21.8 (an unspecified number of catapults, ballistae and other war machines were paraded by Marcellus in his ovation of 211 BC, after the sack of Syracuse); Livy 26.47.5-6 (480 catapults, 75 ballistae and an unspecified number of scorpions were seized by Scipio when he took New Carthage); App. *Pun.* 80 (2000 catapults from the Carthaginian arsenal were handed over to the Romans in 149 BC). According to *IG* II^2 1627, B ll. 328-329 and following the interpretation of Marsden 1969: 57-58, eleven catapults might have already been captured by the Athenians at Eretria in 340 BC.

[130] Xen. *An.* 3.4.17, with Lee 2007: 130.

[131] Other uses of the ropes made of *spartum* than for rigging the ships are mentioned in Cato *Agr.* 3.3 and Plin. *HN* 28.11.46, 35.40.137.

[132] Hdt. 7.25, 9.115.

[133] Hdt. 9.121.1: *hōs anathēsontes es ta hira.*

[134] Amandry 1953: 110.

[135] Amandry 1946 and Amandry 1953: 104-121, followed by Pritchett 1971-1991: I, 100, III, 281-282 with rejections of the objections against the hypothesis. Amandry 1953: 110 rightly allows for the possibility that the spoils were not dedicated only at the Treasury of the Athenians at Delphi but in other local and pan-Ionic sanctuaries, too.

military use were equally plundered during predatory raids, small-scale engagements over status and lengthy hegemonic conflicts. However, if looting such items in the earliest forms of warfare was ostensibly driven by the exclusive desire for gain and aimed at use in future conflicts or conspicuous display, in protracted hegemonic wars plundering was frequently also prompted by the immediate need to replace damaged, worn out or inappropriate articles and replenish insufficient or depleted stocks, as well as the intention to deny the enemy useful resources for conducting war.

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Abbreviations/editions

IG II^2 = Kirchner, J. (ed.) 1913-1940. *Inscriptiones Graecae II et III: Inscriptiones Atticae Euclidis anno posteriores*, 2nd edition, Parts I-III. Berlin: Walter de Gruyter.

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Samnite Armour and Linen

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Abstract: Starting with an analysis of a well-known episode concerning the formation in 293 BC of an elite legion of Samnite soldiers (the so-called *legio linteata*), this paper provides an overview of the use of linen in the military equipment and armour of the ancient Samnites. Based on the little evidence available in literary sources and the archaeological and visual records, it can be argued that linen was used to produce both the tunics worn by the Samnites and the lining of their bronze defensive weapons (e.g. bronze belts, triple disc cuirasses, helmets, etc.). Furthermore, cuirasses made of toughened linen were probably adopted by local warriors. It is likely that linen played an important role in the daily life of the Samnites, also being used in religious and civil contexts. In pre-Roman Italy, the Samnites were probably major growers of flax and producers of fine linen.

Keywords: armour, flax, *legio linteata*, linen, Samnites, war

By means of a case study, this paper[1] highlights aspects of the use of flax and linen in the military equipment and armour of the ancient Samnites.[2]

The research is based on the scarce data coming from literary sources and the archaeological record. With reference to the former, the data are mainly provided by authors linked to the Roman annalistic tradition (Livy in particular). This kind of information is quantitatively limited and essentially linked to the narration of the facts. Therefore, to assess its real value, it is necessary to bear in mind the well-known problems associated with the use of data derived from this tradition in terms of the historical reconstruction of the events. Specifically, they include the typical bias and tendentiousness (substantially reflecting a pro-Roman perspective) of the annalistic tradition; the difficulties of ancient authors in evaluating and characterizing the military events of the past solely on the basis of references in annalistic writers; the possible presence – in the narrative of the events – of aporias, contradictions, anachronisms and duplications of facts; and the updating of the by-then antiquated military lexicon, a process clearly influenced by the terminology used in the course of the Late Republican and proto-Imperial ages (i.e. the periods in which Livy lived and wrote).[3]

The case study is concerned with the end of the so-called Third Samnite War when the Samnites are said to have made a final desperate attempt at victory. The main source is a well-known passage from the tenth book of Livy's *ab Urbe condita*.[4] Additional information comes from a short entry in Paul the Deacon's epitome of Festus' *De verborum significatu*.[5] The brief accounts of the Samnite oath provided by Dio[6] and Zonaras[7] add little, as does Pliny's reference[8] to the victory of

[1] Realised within the PIANO NAZIONALE DI RIPRESA E RESILIENZA (PNRR) Missione 4 'Istruzione e Ricerca' - Componente C2 Investimento 1.1 PROGETTO DI RICERCA DI RILEVANTE INTERESSE NAZIONALE bando PRIN 2022 PNRR, Prot. P2022CXH73PRIN 'ARAKNE – The intertwining of Biodiversity and Culture of textile fibres heritage. Bioarchaeological investigation on flax and wool diversity loss; from a deep time perspective to strategies for conservation and promotion of "Bio-cultural Heritage"' (CUP: F53D23011410001).

[2] On the Samnites and on the sense in which the ethnic Samnite is being applied in this paper see Salmon 1967 (1985); Tagliamonte 2005; Scopacasa 2014.

[3] On these problems, see Tagliamonte 2021: 348-349.

[4] Livy 10.38.2-12: 'Et forte eodem conatu apparatuque omni opulentia insignium armorum bellum adornaverant, et deorum etiam adhibuerant opes, ritu quodam sacramenti vetusto velut initiatis militibus. dilectu per omne Samnium abito nova lege, ut, qui iuniorum non convenisset ad imperatorum edictum quique iniussu abisset, eius caput Iovi sacraretur. Tum exercitus omnis Aquiloniam est indictus. Ad quadraginta milia militum, quod roboris in Samnio erat, convenerunt. Ibi mediis fere castris locus est consaeptus cratibus pluteisque et linteis contectus, patens ducentos maxime pedes in omnes pariter partis. Ibi ex libro vetere linteo tecto sacrificatum sacerdote Ovio Paccio quodam, homine magno natu, qui se id sacrum petere adfirmabat ex vetusta Samnitium religione, qua quondam usi maiores eorum fuissent, cum adimendae Etruscis Capuae clandestinum cepissent consilium. Sacrificio perfecto per viatorem imperator acciri iubebat nobilissimum quemque genere factisque; singuli introducebantur. Erat cum alius apparatus sacri qui perfundere religione animum posset, tum in loco circa omni contecto arae in medio victimaeque circa caesae et circumstantes centuriones strictis gladiis. Admovebatur altaribus magis ut victima quam ut sacri particeps adigebaturque iure iurando quae visa auditaque in eo loco essent, non enuntiaturum. Dein iurare cogebant diro quodam carmine in execrationem capitis familiaeque et stirpis composito, nisi isset in proelium, quo imperatores duxissent et si aut ipse ex acie fugisset aut si quem fugientem vidisset non extemplo occidisset. Id primo quidam abnuentes iuraturos se obtruncati circa altaria sunt; iacentes deinde inter stragem victimarum documento ceteris fuere, ne abnuerent. Primoribus Samnitium ea detestatione obstrictis decem nominati ab imperatore, eis dictum ut vir virum legerent donec sedecim milium numerum confecissent. Ea legio linteata ab integumento consaepti, in quo sacrata nobilitas erat, appellata est; his arma insignia data et cristatae galeae, ut inter ceteros eminerent'.

[5] Paul. Fest., p. 102 Lindsay: 'Legio Samnitum linteata appellata est, quod Samnites intrantes singuli ad aram velis linteis circumdatam non cessuros se Romano militi iuraverant'.

[6] Dio Cass. 8.36.29.

[7] Zonar. 8.1.8-9.

[8] Plin. *HN* 34.43: 'victis Samnitibus sacrata lege pugnantibus'.

the Roman consul Spurius Carvilius Maximus over the Samnites.

The episode, dated to the year 293 BC, concerns the formation of an elite legion of Samnite soldiers (the so-called *legio linteata*). According to Livy's account, a levy was conducted throughout Samnium (*per omne Samnium*) under a novel regulation, and the whole Samnite army was summoned to Aquilonia, to defend the site on the occasion of a decisive battle. The recruitment was carried out in accordance with an ancient ritual involving a sort of initiation (*ritu quodam sacramenti vetusto velut initiatis militibus*) and a consecration (*sacratio*) by which the soldiers who refused to take the oath were immediately killed.

Many scholars have discussed this passage[9] and some of them[10] have highlighted the rhetorical and literary character of Livy's narrative, denying its historical value. Nonetheless, as Filippo Coarelli acutely noted,[11] the composite and partially invented character of Livy's account would not seem to invalidate either the basic historicity of the facts or its ethnographic reliability. Coarelli also suggested that Livy's long and detailed description of the episode seems to imply its original derivation from an ancient source, later followed by an author in the annalistic tradition, possibly Fabius Pictor.[12]

The entire description of the episode is clearly focused on the topic of linen. The first reference is to the 'old linen book' (*ex libro uetere linteo lecto*) read out during the sacrificial service conducted by an aged priest, Ovius Paccius.[13] The Samnite *sacerdos* announced that he took that service from an old ritual of the Samnite religion (*ex vetusta Samnitium religione*), performed over a century earlier when the Samnites had decided to seize Capua from the Etruscans (423 BC). For ancient Samnium, it is therefore possible to posit the existence of *libri lintei*, that is books written on linen, just as in Etruria and Rome.[14]

The core of the secret ceremony (*occulti sacri*) was a space, about 200 Roman feet (= 59.2 m) square, almost in the centre of the Samnite camp: it was enclosed with wooden stakes and covered with linen cloth[15]. Inside there were altars and sacred instruments and garments (*apparatus sacri*). According to Paul the Deacon, the altar was also enclosed with strips of linen cloth (*ad aram velis linteis circumdatam*).[16]

The Samnite soldiers were admitted into the enclosure one by one, and then led up to the altar, to take an ancient oath, swearing to fight to the death. The description given by Livy makes it possible to affirm that the enclosure was a sacred space, square in shape and of considerable size, which may be properly described as a *templum minus*.[17]

Some scholars[18] have emphasised the possible correspondence between the *legio linteata* enclosure and the first phases of the monumentalization of the Samnite sanctuary at Pietrabbondante, with particular reference to the so-called Ionian temple (3rd century BC) built in the area then occupied by the architectural complex known as temple-theatre B. The small building was flanked by colonnaded porticos and enclosed within a square precinct measuring 56 m on each side. A similar correspondence in terms of the site plan was recognised in the small Samnite sanctuary at San Giovanni in Galdo.[19] On this basis, the *legio linteata*'s enclosure is believed to derive from a sort of archetype, recalling the original Samnite cult-places and sanctuaries.[20]

In contrast, other scholars[21] have supposed that Livy's passage was inspired by the description of the Roman military camp given by Polybius[22] in the sixth book of his *Histories*, specifically emphasizing a correspondence between the *legio linteata* enclosure and the *praetorium,* the central space of the camp.

Whatever the model for Livy's description, it is interesting to note that ancient sources attest to the use of linen both to enclose small sacred places (*minora*

[9] E.g. Tondo 1963: 71-103; Salmon 1967 (1985): 108 ff., 197-201; Sordi 1976; Briquel 1978: 137-145; Saulnier 1981: 109-113; 1983: 89-95; Rouveret 1986: 108 ff.; Segarra Crespo 1998: 203-205; Coarelli 1996; Calisti 2005; de Cazanove 2008; 2011: 366 ff.; Simon-Mahé 2014; Członkowska-Naumiuk 2022.

[10] E.g. Salmon 1967 (1985): 108, 111; Saulnier 1981: 107. According to Sordi 1976: 162 ff., Livy's description depends on an annalistic source of the 1st century BC.

[11] Coarelli 1996: 14: 'il rito collocato da Livio al campo di Aquilonia può essere interpretato come un documento storico reale: non nel senso di un evento puntuale, ma piuttosto come documento di carattere etnografico affidabile, anche se in parte deformato in funzione polemica'.

[12] Coarelli 1996: 14. Cf. Oakley 2005: 398.

[13] Livy 10.38.6.

[14] Cf. Roncalli 1978-80; Piccaluga 1994. Also in the case of Anagnia (in the ancient territory of the Hernicans), literary sources testify the use of *libri lintei*: Fronto *Ep. ad M. Caes*. 4.4.1.

[15] Livy 10.38.5: 'Ibi mediis fere castris locus est consaeptus cratibus pluteisque et linteis contectus, patens ducentos maxime pedes in omnes pariter partes'.

[16] Paul. Fest., p. 102 Lindsay.

[17] Paul. Fest., p. 146 Lindsay.

[18] La Regina 1976: 226; Coarelli and La Regina 1984: 234-235; Coarelli 1996: 15-16. Cf. Sisani 2001: 134, 140-141.

[19] Coarelli and La Regina 1984: 234-235; Capini 1996: 63-64; Coarelli 1996: 16. On this interpretation, see the cautious position of Stek 2009: 39 ff., 51 ff.

[20] However, with reference to the first phases of the sanctuary of Pietrabbondante, La Regina and Coarelli's proposals need now to be compared with the evidence derived from the recent excavations: La Regina 2022.

[21] Salmon 1967 (1985): 111, 197; de Cazanove 2008; de Cazanove 2011: 367 ff.

[22] Particularly, Polyb. 6.31.10.

templa)[23] and in sacrificial services.[24] More generally, given its 'purity' and whiteness, linen was considered suitable for religious ceremonies and cult practices,[25] the white colour being particularly fitting for the gods.[26] As ancient sources attest, in the Roman world, linen was usually worn by priests,[27] probably as in the case of the Samnite *sacerdos* Ovius Paccius.[28]

After taking the oath, the soldiers formed an elite unit (16,000 in number),[29] the so-called linen legion (*legio linteata*), from the material (*linum*) with which the place of the oath was covered.[30] A similar explanation of the name is given by Paul the Deacon.[31]

As Livy reports,[32] the *cohortes linteatae* were provided with resplendent weapons, armour and plumed helmets to distinguish them from the other soldiers of the Samnite army.

Regarding their equipment and armour, other Livian passages, from the tenth[33] and especially the ninth[34] books of the *ab Urbe condita* provide better information. The ninth book concerns events that occurred in the year 310 BC (or 309 BC, according to the *Fasti Capitolini* chronology), during the so-called Second Samnite War. The Samnite army was then composed of two divisions, one of which had their shields embossed with gold, the other with silver. The warriors had a protective plate (*spongia*) for their breast, and a single greave covered their left leg; their helmets were adorned with plumes, to add to their stature. The golden-armoured soldiers wore tunics of various colours (*versicolores*) and the silver-armoured soldiers wore tunics of white linen.

In terms of content and information, there seems to be a close relationship between this passage and the description of the *legio linteata* given by Livy in the tenth book. Furthermore, central roles in the two passages are played by the homonymous Roman commanders L. Papirius Cursor senior, who was *dictator* in the year 310 BC and consul five times (326, 320, 319, 315, 313 BC), and his son, L. Papirius Cursor, consul in the years 293 and 272 BC. Thus, Livy's passage in the ninth book on the facts of the year 310 BC has been considered by some scholars[35] a duplication of the account of the facts of the year 293 BC in the tenth book, casting doubt on the historical credibility of the earlier event.

It seems likely that the two passages are part of the same text, which probably refers to the more recent episode (293 BC). Livy and his sources could have drawn on the latter to reconstruct the events described for the year 310 BC.[36]

Livy's passages in Books 9 and 10 contain explicit references to the *tunicae linteae candidae*[37] worn by the silver-armoured warriors of the Samnite *legio linteata*. On the other hand, the golden-armoured warriors wore tunics of various colours (*tunicae versicolores*). Thus, the whiteness (*candor*) and brightness (*nitor*) of the equipment and armour of the *legio linteata* are clearly emphasised.[38]

As some scholars have noted,[39] the contrast between white and mixed colours has a high symbolic value, particularly in such a description, characterised by rhetorical and inventive elements. A similar opposition can be seen between linen and wool, in accordance with an ancient theory of 'natural history' based on the writings of Plato and Aristotele and on a moralistic perspective: flax originates from the immortal earth, whereas wool is derived from the body of an animal and is therefore impure.[40]

With respect to daily life in ancient Samnium, there are no reasons to doubt that local warriors wore tunics of white[41] as well as coloured linen, although linen is known to have been less suitable for dyeing than wool because of its poor absorption of dyes, and because the dyeing process was more expensive and less satisfying (it made the fabric rougher).[42] It thus seems

[23] Paul. Fest., p. 146 Lindsay: 'Minora templa fiunt ab auguribus, cum loca antiqua tabulis aut linteis sepiuntur, ne uno amplius ostio pateant, certi verbis definita. Itaque templum est locus ita effatus aut ita septus, ut ex una parte pateat, angulosque adfixos habeat ad terram'. The use of boards (*tabulae*) to enclose a sacred space is probably evoked in the inside walls of the precinct of the Ara Pacis, with lower register resembling wooden paneling, see Rossini 2006: 22.

[24] Paul Fest., p. 49 Lindsay testimonies: 'Capital linteum quoddam, qui in sacrificiis utebantur'; cf. Sen. *Ep.* 95.47; Philostr. *V A* 8.7.5.

[25] Piccaluga 1994: 12 ff. Cf. Gleba 2008: 68.

[26] E.g. Pl. *Leg.* 12.956a.

[27] E.g. Apul. *Met.* 11.10.

[28] Cf. Schneider Hermann 1996: 4-9.

[29] Aside from its reliability, the number of 16,000 men recalls that of the Macedonian and Hellenistic phalanxes: e.g. Livy 33.4.4 (battle of Cynoscephalae, Philip V's army: 'Macedonum phalanx'); Livy 37.40.1 (battle of Magnesia, Antiochus III's army: '... more Macedonum armati... qui phalangitae appellabantur'). Cf. Taylor 2014: 313, 315. It is also interesting to note that according to Dio's testimony (78.7.1-2), the emperor Caracalla enlisted 16,000 Macedonian soldiers to organise the so-called Alexander's phalanx.

[30] Livy 10.38.12: 'Ea legio linteata ab integumento consaepti, quo sacrata nobilitas erat, appellata est'. However, Livy 9.40.9 seems to implicitly presuppose a connection between the name *legio linteata* and the linen tunics worn by Samnite soldiers, cf. Salmon 1967 (1985): 111.

[31] Paul. Fest., p. 146 Lindsay: 'Legio Samnitum linteata appellata est, quod Samnites intrantes singuli ad aram velis linteis circumdatam non cessuros se Romano militi iuraverant'.

[32] Livy 10.41.10.

[33] Livy 10.39.12-13.

[34] Livy 9.40.1-17.

[35] Salmon 1967 (1985): 109; Coarelli 1996: 11.

[36] See Coarelli 1996: 11.

[37] Livy 9.40.3; cf. 10.39.12: 'candore tunicarum fulgentem aciem'.

[38] Livy 9.40.1-4; 10.39.12-13; 10.40.12. Cf. Flor. 1.11.7.

[39] E.g. Briquel 1978: 136 ff.; Rouveret 1986: 110 ff.

[40] Rouveret 1986: 113; Gleba 2008: 68.

[41] Salmon 1967 (1985): 111; Saulnier 1983: 73, 78-79; Schneider Hermann 1996: 4-9; Burns 2005: 198 ff.

[42] Cf. Gleba 2008: 68.

Figure 1: Funerary painted slab from Nola: Campanian warriors (photograph: Museo Archeologico Nazionale di Napoli).

possible that the linen yarns were coloured and not the fabrics. Alternatively, the linen *tunicae versicolores* may have been decorated with strips of applied purple or coloured wool.[43] A further possibility is indicated by the case of tomb 382 in Ordona.[44]

Further evidence regarding the Campanians and the Lucanians, considered peoples of Samnite origin by the ancient tradition, is seen in the funerary wall paintings and red-figure vase paintings dated to the 4th century BC. These provide abundant iconographic testimony of the use of coloured tunics, worn by local warriors or hung on spears and exhibited as trophies by victorious warriors or knights returning from wars[45] (Figure 1).

It is noteworthy that one of the painted slabs of a semi-chamber tomb found in the Campanian city of Nola (via del Seminario) in 1977[46] preserved the heroic portrait of a knight with a horned helmet of the Montefortino type: the right horn seems to be silver-plated and the left horn bronze-gilded (Figure 2).

An explicit connection with the *legio linteata* episode has been proposed[47] in the case of a fragment of a painted slab from a chamber tomb in Cumae, dated to the end of the 4th century BC or more probably the first half of the 3rd century BC, when the city was under Samnite control. The painted fragment seems to reproduce – in the foreground – the arms and hands of two male figures, holding a torch, red bandages and a bundle of leaves. In the background, the legs of a group of warriors are visible: only the left legs seem to be covered by white greaves. On this basis, the painting has been identified[48] as a representation of the ritual oath taken by the *legio linteata* soldiers. The proposal is suggestive but highly hypothetical, considering the fragmentary state of the painted slab and the incomplete correspondence between the preserved image and Livy's narrative.

However, the Campanian funerary wall paintings probably attest to the use of linen body armour

[43] Scotti 2020: 159, n. 422.
[44] The analysis of the organic remains from the tomb determined that the ground weave of the textile was composed of wool fibres, while the yarns used for the decoration were made of flax fibres (Catalli *et al.* 2018: 160 ff.).
[45] Saulnier 1983: 48 ff.; Schneider Hermann 1996: 117-119; Benassai 2001: 187 ff; Carroll, in this volume.
[46] Edited by S. De Caro, the painted tomb is included in Benassai 2001: 95-97, n. 4
[47] Valenza Mele 1996.
[48] Valenza Mele 1996. Cf. Benassai 2001: 215-218, for a discussion. See also Caputo 2000: 75.

Figure 2: Funerary painted slab from Nola: portrait of a Campanian knight (photograph: after Benassai 2001).

(cuirasses) by local warriors. A possible example is the standing warrior portrayed on a painted slab from tomb 16 of the Ponte San Prisco necropolis in Capua.[49] The warrior wears a red tunic with a white border, over which he wears a white cuirass with *pteryges*. The cuirass can probably be identified with a *thorax linteus*. Similar testimony comes from a beautiful painted metope pertaining to the Doric frieze of the so-called temple A at Cumae.[50]

It is plausible that Livy's references to the whiteness (*candor*) and brightness (*nitor*) of the Samnite equipment and weapons[51] are not merely the product of invention or rhetorical choice.[52] Literary sources and the archaeological record provide clear evidence of the use of gilded bronze armour among the pre-Roman peoples of Italy, especially in central and southern Italy. Regarding the Samnite world, one of the best samples is represented by the well-known triple-disc cuirass found in a Punic tomb not far from Ksour es Saaf and kept in the Bardo National Museum in Tunis[53] (Figure 3).

It is likely that fire gilding (or mercury gilding) was the technique used. On the other hand, the reference to the 'silver-armoured' soldiers (*argentea acies*)[54] seems to indicate another possibility. Indeed, recent metallographic analyses conducted on samples of so-called Samnite bronze belts show that these artefacts

[49] Benassai 2001: 66-68, n. C.31, with bibliography. Cf. Burns 2005: 104 ff.

[50] Dated to the mid-4th century BC, the painted metope shows a Centauromachy, with a warrior wearing a white *linothōrax*: Rescigno 2008. Another testimony of the use of a linen cuirass is probably given by a votive bronze statuette of Mars, attributed to Sabellian production, see Colonna 1970: 181-182, n. 594.

[51] Livy 9.40.1-4; 10.39.12-13; 10.40.12. Cf. Flor. 1.11.7.

[52] See Tagliamonte 2009.

[53] Guzzo 2016, with bibliography.

[54] Livy 10.39.13.

Figure 3: Gilded bronze triple disc cuirass from Ksour es Saaf, Tunisia (photograph: A. van Loon).

were often produced using high-tin bronze alloys, resulting in an attractive silver-like appearance.[55]

Returning to linen, on the basis of what has been said so far, it can be argued that it played an important role in the Samnites' daily lives, being used in religious, military and civil contexts. It seems plausible that 'the Samnites in Italy were major growers of flax and producers of fine linen'.[56] Literary sources make implicit mention of local production,[57] and the Samnitised cities of Cumae

[55] E.g. Faustoferri 2012: 259; Riccucci *et al.* 2013: 961 ff.; Riccucci *et al.* 2015: 154-156.

[56] Aldrete *et al.* 2013: 16. Cf. Gleba 2008: 69.

[57] E.g. Livy: 8.36.11. During the so-called Second Samnite War (325 BC), the Samnites sought peace from the Romans and gave every Roman soldier a garment and a years' pay (*singula vestimenta et annuum stipendium*). In the same period, other peoples of pre-Roman Italy, as the Etruscans and the Hernicians, were forced to supply tunics to the Romans: e.g. Livy 9.41.7 and 9.43.7 (309 and 307 BC).

Figure 4: Funerary painted slab from Paestum, Andriuolo necropolis, tomb 114: portrait of a Lucanian knight (photograph: after Pontrandolfo and Rouveret 1992).

and Capua were renowned for their production of flax nets[58] and ropes.[59] Moreover, the Sabellian people of the Paeligni, neighbours of the Samnites, cultivated a variety of flax that was praised for its whiteness.[60] According to Pliny the Elder,[61] white linen was unanimously appreciated. Thus, it seems likely that a similar variety of flax was also cultivated and used by the Samnites[62] to produce fabrics for the white tunics and veils mentioned by ancient authors (Livy, Paul the Deacon) in their accounts of the formation of the Samnite *legio linteata*.

The Lucanians are also attested as having worn cloth body armour.[63]

In the first half of the 3rd century BC, the Greek poet Leonidas of Tarentum cites a dedication offered by Agnon, son of Euanthes, to Coryphasian Athena consisting of eight woven (linen?) corselets (*hyphantous thōrakas*), eight shields, eight helmets and eight axes, taken as spoils from the Lucanians.[64]

On the archaeological level, unfortunately, we do not have much information on the ancient cultivation of flax and the use of linen in pre-Roman Samnium. The archaeobotanical record is very limited[65] and other data from the archaeological excavations carried out during the last few decades have not been fully explored.[66]

Several mineralised textile fragments as well as pseudomorphs have been found in Samnite burial contexts. The main evidence comes from the necropolis of Alfedena, in the upper Sangro valley. The presence of textile remains was noted during the excavations conducted at the beginning of the 20th century by the archaeologist Lucio Mariani,[67] confirmed in more recent years by F. Parise Badoni and M. Ruggeri Giove.[68] However, no detailed analysis of the remains has yet been conducted. As extensively documented, the textile remains are preserved in association with metal objects, particularly iron fibulae, razors, knives and dagger sheaths. These traces, found in male and

[58] Plin. *HN* 19.10.
[59] Cato *Agr.* 135.
[60] Plin. *HN* 19.13.
[61] Plin. *HN* 19.6.25.
[62] As argued by Shelton 2009: 118 ff. Cf. Vicari 2001: 31, 101; Gleba 2008: 69; Lipkin 2010: 175; Aldrete *et al.* 2013: 16.
[63] E.g. white linen corselets are probably worn by the Lucanian warriors represented on painted slabs from the Andriuolo necropolis at Paestum (tombs 4/1971 and 114: eastern slabs) (Figure 4): Pontrandolfo and Rouveret 1992: 177, fig. 3, 344 (tomb 114), 198, fig. 2, 199, fig. 4, 350 (tomb 4/1971). Cf. Burns 2005: 105; Gleba 2012: 53-54. Cf. also, for the Apulian peoples, Graells i Fabregat 2018: 218.
[64] *Anth. Pal.* 6.129. Cf. Aldrete *et al.* 2013: 16. See also Mele 1995.
[65] Shelton 2009: 121. Cf. Gleba 2008: 57.
[66] See below.
[67] Mariani 1901: cc. 338-339, 342, 362, etc.
[68] E.g. in the case of the metal artefacts from tombs 60-63, 65, 69, 70, 72, 78, etc.: Parise Badoni and Ruggeri Giove 1980: 34 ff.

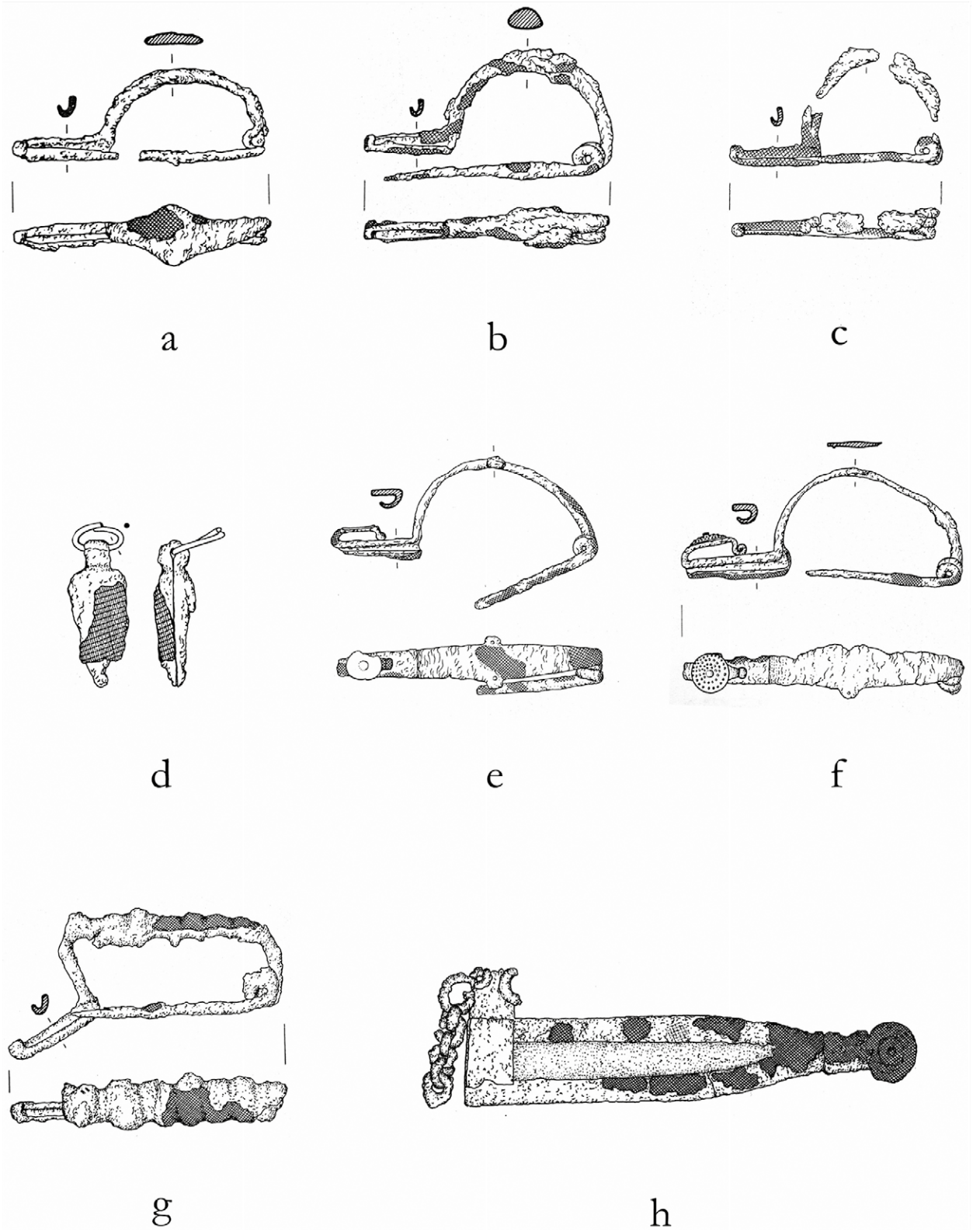

Figure 5: Textile fragments and pseudomorphs on iron objects from Alfedena necropolis (drawings: after Gleba 2008).

female burials of the late 6th and 5th centuries BC, have been interpreted as the possible remains of articles of clothing or the funerary shrouds placed over the dead[69] (Figure 5).

Textile and, more generally, organic remains have also been detected on Samnite bronze belts found in male depositions in Alfedena dated to the 4th century BC.[70] Specifically, they correspond to the leather or fabric lining on the inside of the bronze sheeting or the threads used to secure, through small holes set at regular intervals, the lining to the band of the belt.[71] Similar textile and organic remains have been found[72] on other Samnite bronze belts from the Pentrian region,[73] as well as from other Samnite lands.[74]

Unfortunately, very little information is available about them. In the case of the Cavata necropolis in Pennapiedimonte (tombs 1, 11, 13),[75] due to the microclimatic conditions of the burial context, substantial traces of the organic elements of the belts are exceptionally preserved. The remains have been attributed both to the clothing and the shrouds, as well as to an animal skin sewn on the long sides with a leather strip then fixed to the band with small nails and holes.[76] However, their direct analysis by Mauro Rottoli revealed that such remains are part of an unbalanced tabby weave in wool.[77]

Conserved on a rare late Archaic bronze belt from tomb 3 at Serra Santa Croce necropolis, near San Gregorio Matese,[78] were the remains of the thread used to secure the lining to the bronze band (Figures 6-7). The thread is made of plant fibre, probably flax. It is possible that strong threads were also used to fasten the belt because no bronze clasp has been found in the grave.

Over the last few years, a more detailed analysis has been carried out on Samnite bronze belts from graves dated to the period of the 'Samnitization' of Daunia. One of the two bronze belts found in tomb 1/08 of the Giarnera Piccola necropolis at Ascoli Satriano represents a good example.[79] Dated to the second half of the 4th century BC, the burial is a bisome tomb containing two adults, a man and a woman. On the basis of the contextual data, one of the two bronze belts seems to be connected to the deceased woman. The metal surface of this belt is largely covered by organic remains (Figure 8).

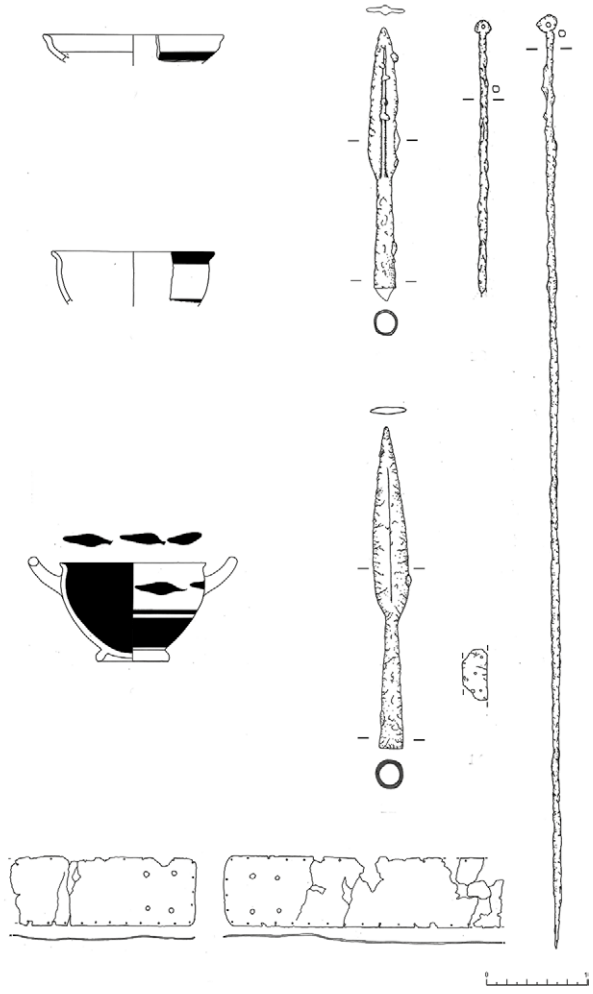

Figure 6: Samnite bronze belt and grave goods from San Gregorio Matese, Serra Santa Croce necropolis, tomb 3 (drawings: A. Natali).

The analysis, still in progress, shows that some of the remains are related to the woman's clothing (three different types of fabric including wool and perhaps linen) and some to strips of hide placed along the borders of the bronze band, as well as the fur lining of the belt.[80] In the case of the above-mentioned tomb

[69] Parise Badoni and Ruggeri Giove 1980: xiii; Gleba 2008: 57 n. 62.
[70] Romito 1995: 55, n. 35, 55-56, n. 43, 56, n. 45 and 46 (with bibliography).
[71] On leather or fabric lining of the bronze belts cf. Suano 1986: 1; 1991: 135; 2000: 183.
[72] However, only rarely these presences have been the object of specific analysis and organic study.
[73] E.g. from Gildone: Romito 1995: 65, n. 121-122.
[74] To give some examples: San Gregorio Matese, loc. Serra Santa Croce, tomb 3 (Campanian-Samnite territory): see below; Pennapiedimonte, loc. Cavata, tombs 1, 11, 13 (Carricins): see below; Guglionesi (Frentanians): Romito 1995: 60, n. 79; Morra de Sanctis, loc. Selvapiana (Hirpinians): Romito 1995: 119, n. 495; Solofra, loc. La Starza (Hirpinians): Romito 1995: 120, n. 502; Oliveto Citra, loc. Turno (Hirpinians): Romito 1995: 127-128, n. 551.
[75] Riccitelli 2001: 18-19; Faustoferri 2012: 259-260.
[76] Riccitelli 2001: 18.
[77] Unpublished report by Mauro Rottoli. I thank Maria Isabella Pierigè of the Soprintendenza archeologia belle arti e paesaggio per le province di Chieti e Pescara for this information.
[78] Tagliamonte *et al.* 2023: 106, 107, fig. 7.10, 109. The bronze belt is under study.
[79] Tinkhauser *et al.* 2020.
[80] Tinkhauser *et al.* 2020: 244, 245, 248.

Figure 7: Samnite bronze belt from San Gregorio Matese, Serra Santa Croce necropolis, tomb 3: thread from the bronze belt (photograph: F. Meo).

Figure 8: Samnite bronze belt from Ascoli Satriano, Giarnera Piccola necropolis, tomb 01/08 (photographs and drawing: after Tinkhauser *et al.* 2020).

382 from Ordona,[81] the approximately 70 fragments of decorated fabric found alongside the body of the deceased man are believed to be part of a cloak used to wrap the belts discovered in the grave, while several undecorated stratified textile fragments found in the same funerary context were probably part of a shroud.[82]

[81] Catalli *et al.* 2018.

[82] Catalli *et al.* 2018: 160 ff.

Conclusions

To conclude, on the basis of what has been set out above, it can be argued that the evidence from literary sources shows that Samnite warriors made use of linen for their military equipment and armour. Livy's narrative of the so-called 'linen legion' episode (293 BC) provides the main information: the entire passage is clearly focused on the topic of linen. Further information comes from Livy and other ancient writers (e.g. Pliny the Elder and Paul the Deacon).

Archaeological and visual sources also provide evidence of the military use of flax and linen in ancient central Apennine Italy. Linen was used to produce the tunics worn by the Samnites and to make the fabric lining of their bronze defensive weapons (e.g. bronze belts, triple disc cuirasses, helmets, etc.). Furthermore, linen body cuirasses were probably adopted by local warriors. It is likely that flax and linen played an important role in the daily life of the Samnites, also being used in religious and civil contexts, as seen in literary and archaeological sources. It is plausible that the Samnites in Italy were major growers of flax and producers of fine linen.

Future research could shed new light on aspects of a topic that remains somewhat marginal in current scholarship.

Abbreviations/editions

Lindsay = Lindsay, W.M. (ed.) 1930. *Glossaria Latina iussu Academiae Britannicae edita*. Vol. IV: *Placidus, Festus*. Paris: Les Belles Lettres.

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Typical Dress in Daunia (Puglia Region, Southern Italy) and Its Representation in Stone Carvings

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Abstract: This paper looks at one of the most important archaeological discoveries of textiles in Italy in recent years.[1] Made in ancient Daunia in the north of the present-day Puglia Region, the discovery has not yet been the subject of a complete published description.[2]

Body ornaments and clothes have always represented status, gender and ethnicity. In the south of Italy, they are a mirror of the social interactions between Greeks and the many Italic populations during much of the 1st millennium BC.[3] The complexity and local variability of economic and other relations between the diverse communities led to various degrees of cultural interaction, giving rise in some cases to hybridisation.[4] In material culture, a blending of styles, techniques and influences has been observed in pottery, architecture, settlement organization, cemetery patterns and more recently textiles, shedding new light on the textile cultures of Italy and their connections to central Europe, Greece, and the Near East during the 1st millennium BC.[5]

Given the importance of textiles and dress codes in creating individual and group identities through direct interaction with the human body, reinforced by the oral transmission of techniques and decorations, this discovery can lead to a broader understanding of various cultural aspects including Daunian military and funerary garments.

Keywords: bronze belt, Daunia, dress, flax, identity and textiles, textile decoration, textile technique, warrior

The context and its finds

The Daunians were the northernmost of the ancient populations of Puglia, the others being the Peucetians and the Messapians (Figure 1). Daunia corresponds to the territory stretching from the Fortore river to the north to the right bank of the Ofanto river to the south.

The Daunians were bordered to the northwest by the Frentani, to the west by the Samnites, to the southwest by the Hirpini (related to the Samnites), to the south by the Lucanians and to the southeast by the Peucetians. Archaeological data indicate that from the 9th to the 5th centuries BC, Daunia was a culturally homogeneous area. The situation began to change in the 4th century BC following a series of events: the military campaign of Alexander the Molossian in Italy in 334-333 BC, the subsequent Oscanisation at the hands of the Samnites across the Apennines, the Roman penetration starting in 327 BC and the foundation of the first Roman colony in Lucera in 314 BC. By the end of the 3rd century BC, the Daunian cultural experience was at an end.[6]

Herdonia is an ancient town on the hills flanking the broad plain in northern Puglia known as the Tavoliere. It lies on the right bank of the Carapelle river, on the southwest side of present-day Ordona (Figure 1). It was one of the biggest Daunian towns, having been occupied since the Bronze Age as a scattered settlement consisting of small groups of houses interspersed with tombs. The houses are generally built to a rectangular plan: they are made of wood, with traces of the poles still clearly visible in the rock, or of river pebbles and mud bricks. The necropolis has yielded an impressive number of tombs, whose funerary assemblages make it possible to trace the stylistic evolution of Daunian pottery from the 8th to the early 3rd century BC.[7]

Two funerary structures, dated to the first quarter of the 4th century BC, were discovered in Ordona in 2012 by the Archaeological Superintendence of Puglia (Figure 2). Given their monumental nature and the distinctive features of the funerary rituals, which set these burials apart from the common pit graves, they are believed to have been built for the local aristocracy.[8] Despite the damage caused by illegal excavations, Tomb

[1] Realised within the PIANO NAZIONALE DI RIPRESA E RESILIENZA (PNRR) Missione 4 'Istruzione e Ricerca' - Componente C2 Investimento 1.1 PROGETTO DI RICERCA DI RILEVANTE INTERESSE NAZIONALE bando PRIN 2022 PNRR, Prot. P2022CXH73PRIN 'ARAKNE – The intertwining of Biodiversity and Culture of textile fibres heritage. Bioarchaeological investigation on flax and wool diversity loss; from a deep time perspective to strategies for conservation and promotion of "Bio-cultural Heritage"' (CUP: F53D23011410001).
[2] Catalli *et al.* 2018.
[3] Donnellan *et al.* 2016.
[4] van Dommelen 2005; 2011; for debate on hybridisation, see e.g. Liebmann 2013; Silliman 2015.
[5] Gleba 2017a; Gleba *et al.* 2018.
[6] For an overview on Daunia between the 9th and the 1st century BC, see Mazzei 2010; 2015.
[7] For more details on the Daunian town see: Mertens 1965; 1967; 1971; 1974; 1976; 1982; 1988; 1997; Iker 1984; 1986; Mazzei 1992; 1994; Volpe 2000; Volpe and Leone 2008.
[8] Catalli *et al.* 2018: 158.

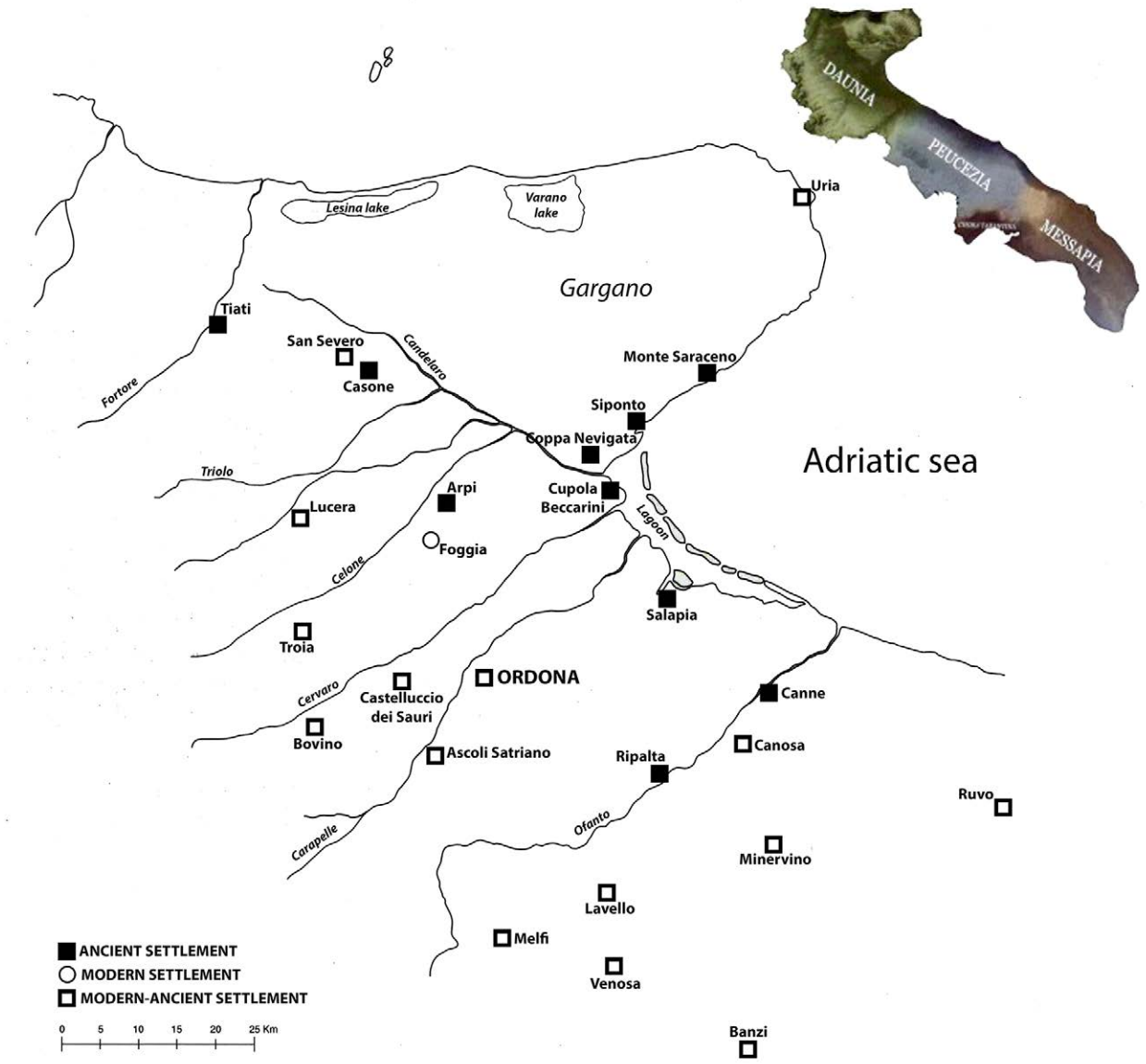

Figure 1: Ordona and the other sites mentioned in the article (drawing: F. Meo).

382 was shown to be the final resting place of a warrior with an elaborate panoply, while a woman was buried in Tomb 384. According to the archaeologists, 'both these tombs have the same aristocratic style, strongly influenced by the Hellenistic culture.'[9]

The warrior was a 30-35-year-old man, identified as a high-ranking individual by both the shape and size of the burial structure and his rich dress. Among the grave goods was a chariot consisting of a rectangular wooden platform with fittings in iron and bronze, some remains of which were recovered. Ideologically, chariots were an aristocratic prerogative in funerary rituals that served to exalt the deceased during their last journey on Earth.[10] Despite an illegal excavation occurring shortly before the official archaeological excavation, most of the artefacts, fortunately, survived and maintained their contextual integrity. Indeed, although the looters disturbed the archaeological context and stole numerous artefacts, the vessels were still discovered in place and can be dated to the period from the second half of the 5th to the early 4th centuries BC. The grave goods of Tomb 382 also included a richly decorated panoply and weapons including two iron swords (with straight blades, cross-guards and hilts covered with pieces of ivory), a spear, a bronze javelin and smaller items such as loops and rings pertaining to unassembled helmet fittings. Unfortunately, this assemblage has yet to be

[9] Catalli *et al.* 2018: 158.

[10] For the iconographic and archaeological evidence of chariots, see Corrente *et al.* 2021.

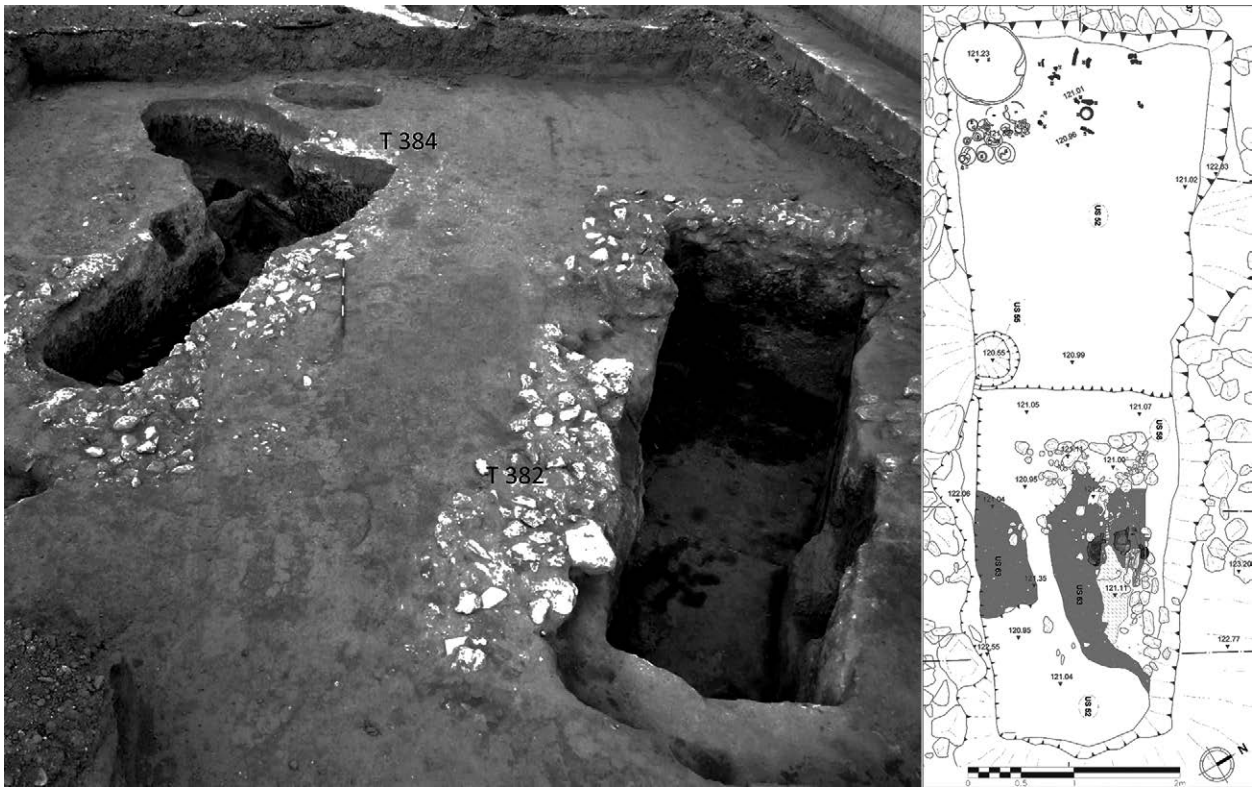

Figure 2: Photo of Tombs 382 and 384 discovered southeast of the modern town of Ordona and plan of T382 with the position of the bronze belts (US 63) (photograph and drawing: after Catalli *et al.* 2018).

the subject of a published description, being merely cited in the article on the textile remains.[11]

The latter consist of approximately 70 fragments of richly decorated fabric, probably from a cloak, used in this context to wrap seven bronze Samnite belts composed of numerous elements including clasps in the shape of palmettes, discovered alongside the body of the deceased man. Several undecorated, stratified textile fragments were found, probably part of a shroud.

Given the state of preservation, micro-excavation was required. This was performed in the laboratories of the Italian Central Institute for Restoration, enabling the identification of eight layers of bronze sheeting recognised as belt fragments interleaved with degraded layers of textiles (Figure 3), with wood at the bottom, most probably part of the funerary bed.

The ground weave is a z/z 2/2 twill, but more complicated weaves, such as a herringbone twill, cannot be excluded. The z-twisted wool yarns have a diameter of 0.16-0.25 mm. The microscopic observations conducted so far have found no trace of pigments in the wool fibres despite their current brown colour.[12] The original colour may have become brown over time, but pending further analyses, nothing more can be posited.

The decoration is made with flax threads with a diameter of 0.30-0.60 mm twisted in the S direction. It consists of continuous and repetitive geometric patterns: meanders in the central part and two lines of swastikas alternating with flowers at the sides (Figure 3).

Daunian dress

The discovery of such a decorated garment can shed light on a series of broader aspects related to Daunian culture and society, arising from the nature of the clothing (funerary, military, etc.) and its possible relationship with the social status of the deceased.

First of all, the weaving technique seems to exemplify a long-standing tradition: twill was common in the Iron Age cultures of southern Italy but started to disappear after the Greek colonisation, mainly from the 6th century BC onwards.[13] Indeed, Iron Age Italic populations wove both twills and tabbies: twill is well attested in the Etruscan area but also in northern Italy during previous epochs.[14] A considerable number of

[11] Catalli *et al.* 2018: 159.
[12] Catalli *et al.* 2018: 161.
[13] Gleba 2017a and 2017b; Meo 2022a.
[14] Bazzanella 2012; Gleba 2012a.

Figure 3: 3D reconstruction of the bronze belt fragments with degraded layers of textiles in between and with wood at the bottom and image of the decorated fabric (photograph: after Catalli *et al.* 2018).

twills have also been found in Bronze- and Iron Age contexts in Switzerland,[15] Austria[16] and southern Spain.[17] On the other hand, twill is totally absent in Greece: all fabric samples from sites spanning the Bronze Age to the Roman period are tabbies.[18] This cannot result from a lack of techniques or technologies for weaving twill, since thread counts of 50-60 threads per cm (a strip of woollen cloth from Lefkandi) or even 90-100 threads per cm (a fragment of woollen cloth from Corfu), and threads with diameters up to 0.18 mm for wool and 0.07-0.08 mm for linen have been discovered in Greece from as early as the Bronze Age.[19] Rather, the absence of twill in Greece can be attributed to a different textile culture, the Italic populations being more closely linked with northern and western Europe via the Apennines than with the east, at least until the foundation of Greek cities in the south of Italy.[20]

The recent discovery of a 2/2 herringbone twill (Figure 4) recovered from the Iron Age necropolis of Incoronata San Teodoro, in the modern-day Basilicata Region, shows that the local communities of this area had full mastery of textile production techniques and is indicative of their skills and creativity.[21]

During the Archaic period, in certa*in situ*ations, contact with the weft-faced tabby-based Greek textile culture gave rise to the creation of new expressions. The case of Ripacandida, a site close to Ordona, provides an example of how Italic and Greek textile traditions met and indeed merged in southern Italy.[22] Woven textiles were identified in eight burials in the Ripacandida necropolis: the vast majority of them are loom-woven

[15] Rast-Eicher 2012.
[16] Grömer 2012; Grömer *et al.* 2013.
[17] Marín-Aguilera *et al.* 2019: 940 (the fifth-century BC finds from Casas del Turuñuelo).
[18] Spantidaki and Moulherat 2012; Gleba 2017a.
[19] Spantidaki and Moulherat 2012: 190-191.
[20] Gleba 2017a.
[21] Meo 2022a.
[22] Gleba *et al.* 2018.

Figure 4: 2/2 herringbone twill recovered in the Iron Age necropolis of Incoronata San Teodoro (Basilicata Region) (photograph: after Meo 2022).

in weft-faced tabby, but tablet-woven fabric was discovered in a tomb dated to the first half of the 6th century BC and what was probably twill in another burial dated to the second half of the same century.[23] The 'mixed' textile culture of Ripacandida is the direct consequence of the interaction between textile workers from the local Italic communities and Archaic Greek settler communities, which led to technological exchange. In the case of Ripacandida, the interaction between Italics and Greeks resulted in the creation of this unusual mixed-textile culture, with the use of tablet-woven borders on weft-faced tabbies that might directly reflect the social status of the local Italic people.

In contrast, the twill of Ordona was found in a burial dated to the first quarter of the 4th century BC, almost two centuries later than the finds from Ripacandida, after three centuries of interaction between Italic populations and the Greek towns of southern Italy. If the fabric is considered to be coeval with the rest of the grave goods, then it attests to strong cultural conservatism in terms of textile technique. Indeed, it represents the lowest dating of twill in southern Italy discovered to date. The more typical archaeological situation is exemplified by Arpi, another important Daunian settlement close to Ordona, where the few textile remains from a fourth-century BC tomb are all loom-woven tabbies, one balanced and the others weft-faced.[24]

On the other hand, the fabric of Ordona is richly decorated and most probably linked to local elites. In the case of Tomb 382, the occupant displays his social status by means of a series of objects buried with him. The woven twill cloth is one of these, clearly valuable given its rich decoration, so the choice of weave can be hardly linked to economic restrictions but rather to a deep-rooted cultural and technical tradition.

Regarding the decoration, meanders and swastikas are widely documented in many other ancient artefacts, engraved on bases and marble friezes or painted on pottery. Moreover, they were common not just in the Greek world but had been used by many Italic populations since the Iron Age on local matt-painted ware. According to the researchers who studied and authored the description of this fabric, the data are not sufficient to identify the technique used to make the decoration. More specifically, they were not able to determine whether it was embroidered or made with the soumak technique.[25] Embroidery is additive and is used to create decorations on finished woven fabric, while soumak consists of adding a pattern during the weaving process so that the supplementary weft threads wrap around the warps.

In recent years, Tiziana Zappatore, an embroiderer who comes from a family of embroiderers, has studied the decorative pattern of Ordona based on the published paper and the few photos of the fabric published to date (Figure 5).[26]

According to her experienced judgement, the decoration is most probably embroidered. Indeed, she has recognised seven different stitches (Figure 6), many of which are still used in modern times:

- Flat stitch, simply passing the thread several times regularly and densely;
- Backstitch, in straight lines;
- Cross stitch, as the name suggests, corresponding to an X-shape;
- Hourglass stitch, like cross stitch but with strings at the top and bottom of the X-shapes;
- Fern stitch: similar to the flat stitch, but placed diagonally to form a wheat-ear pattern;
- Infinity stitch, created by passing the needle back and forth on three levels in an 'eight' pattern;
- Triple stem stitch, composed of three sections performed with a single movement of the needle, without going back.

[23] Gleba *et al.* 2018: tab. 1.
[24] Meo in press.
[25] Catalli *et al.* 2018: 163-164.
[26] I thank Tiziana Zappatore for her commitment and for making her expertise available. Her results, still unpublished, were presented for the first time with F. Meo at the conference entitled *Old Textiles – More Possibilities* (14-18 June 2021) in a presentation entitled *Shedding light on Herdonia decorations*.

Figure 5: Images of Tiziana Zappatore embroidering the decoration of the fabric of Ordona (photographs: T. Zappatore).

A variant of the triple stem stitch with larger sections was also recognised.

Since with the soumak technique the decoration becomes part of the weft of the fabric, the stitches cannot have a different direction from the weft itself. This characteristic is not applicable to at least the two variants of the cross stitch that Zappatore has recognised on the garment of Ordona, since these two stitches in particular run *diagonal* to the weave: once an X is created on the front, the thread runs on the underside of the cloth to the desired starting position for the new figure, proceeding in a zigzag motion.

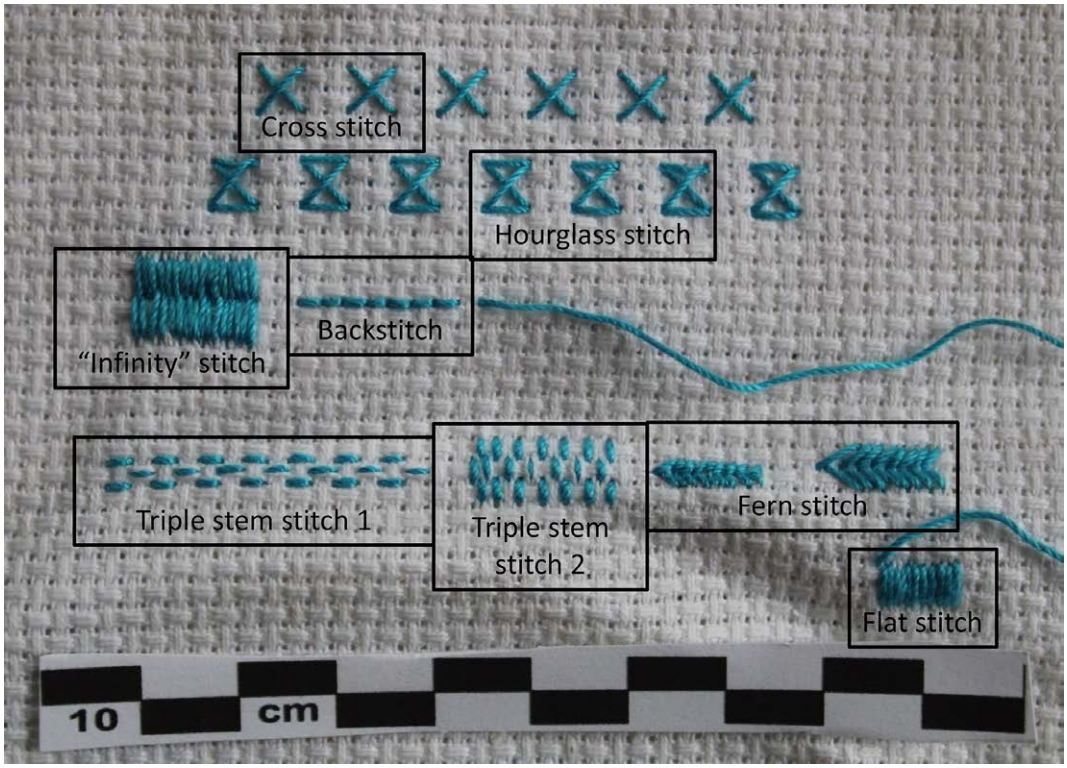

Figure 6: Stitches of the fabric of Ordona recognised by Tiziana Zappatore (photograph and drawing: T. Zappatore).

Together with knowledge of the technical aspects of weaving, the discovery of the fabric of Ordona and its decoration yields new insight into Daunian dress codes, especially when compared with anthropomorphic funerary stelae typical of this area. These artefacts, dated to the period from the mid-7th to the early 5th centuries BC (Figure 7), reflect the complex cultural world of Daunian society.[27] They have been discovered in many settlements in this region and are one to three centuries older than the grave goods of Tomb 382.

Both male and female stelae have their arms folded across their chests. Female heads are sometimes featureless, while male heads have two types of headdress, one conical and the other flat and horizontal, the latter denoting the individual depicted as a warrior. As for clothing, the female stelae have necklaces, fibulae, pendants and belts. Male stelae have squared shoulders, a *kardiophylax* on the chest and a transversally arranged cross-handled sword inside a scabbard at waist level, while on the back there is a large circular shield decorated with a vortex, lozenges, flying predatory birds, etc. (Figure 8). The rest of the surface is decorated with a series of images with scenes that refer to daily life or the mythological-religious sphere. Among the most enigmatic scenes, there is one with two warriors holding a third warrior upside down by his feet, pointing their spears at his throat. Women are always represented with a long braid and a tunic that covers their bodies to their calves. Men have a short tunic to their knees and a hat or helmet.

Focusing on the garments, there is an extraordinary similarity between the detailed decorations engraved on these stelae and those of the Ordona fabric. The borders of the robes are decorated with combinations of rectangles, lozenges, swastikas and linked meanders, which were originally painted in various colours. In one case, there are concentric circles. As already highlighted in the paper published in the proceedings of the 6th Purpureae Vestes Symposium, the stelae were most probably used deliberately, not only to represent the person depicted, but also to display the clothes as an integral part of Daunian identity.[28]

What clearly emerges from the stelae is that decoration similar to that of Ordona was used by both men and women, as confirmed by the many stelae representing female figures. It is thus hard to link the garment to the role of the deceased as a warrior. Indeed, it is more probable that the fabric of Tomb 382 is linked to the

[27] Nava 1980; 1988; 2001; 2022; Ferri and Nava 1983; D'Ercole 1999; Verger 2008; Norman 2009; 2011; 2018.

[28] Nava 1980; 1988; 2001; 2022; Ferri and Nava 1983; Verger 2008; Norman 2009; 2011; 2018; Catalli *et al.* 2018.

Figure 7: Daunian statue-stelae (photographs and drawings: after https://catalogo.beniculturali.it/ - license CC-BY 4.0).

status that the deceased – and others of either gender – enjoyed in Daunian society.

On the other hand, as previously noticed, the stelae are dated to the period from the 7th to the early 5th centuries BC, while the grave goods of T382 are dated to the early 4th century BC. Assuming the fabric to be coeval with the grave goods, it indicates that Daunian elites maintained the same approach to decorating textiles and representing their status from the Iron Age until at least the late Classical period, without adopting evident changes.

There is however another possibility: the item may be older than the rest of the grave goods. Considering where the fabric was found and the use that was made of it, i.e. not as a garment worn by the deceased, but to wrap some bronze belts, this is entirely plausible.

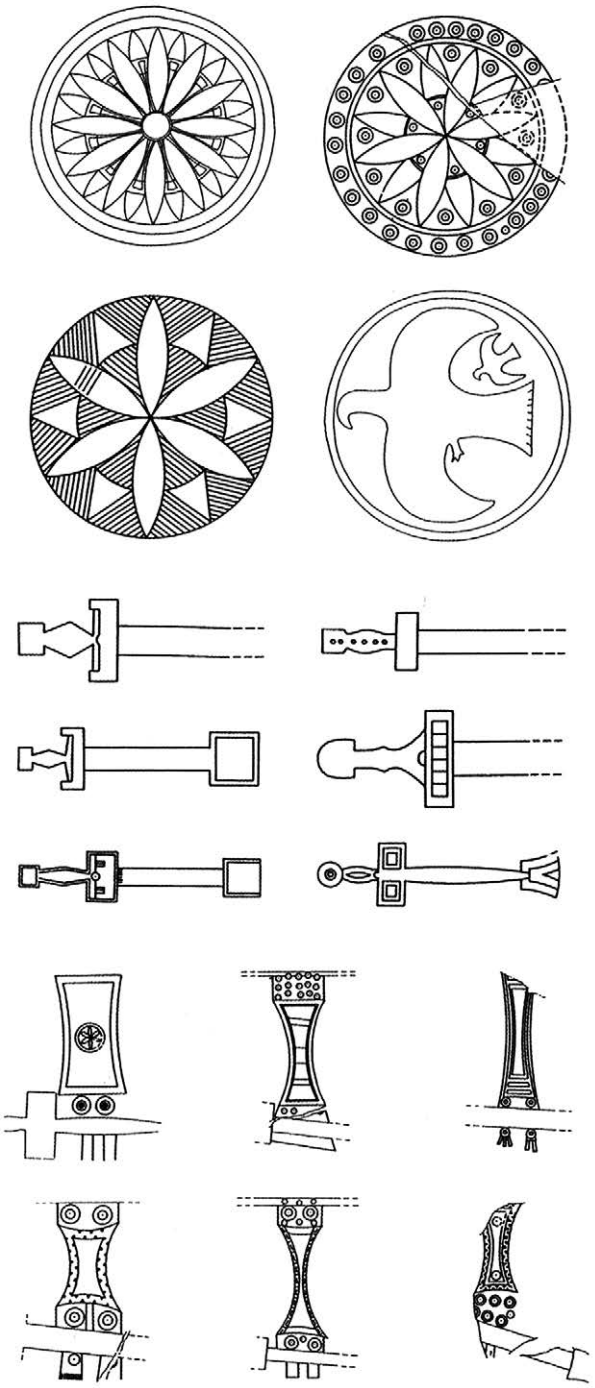

Figure 8: Shields, swords and *kardiophylakēs* engraved on the Daunian stelae (drawings: after Nava 2001).

If the decorated fabric had been worn by the deceased, it would have had a direct link with him and its dating would have been the same as the rest of the grave goods. In this case, however, the fabric was reused, so it is possible that it was older than the other funerary objects, perhaps closer to the Daunian stelae. It is also possible that the garment belonged to the deceased during his lifetime and that it was included in the grave goods for this reason, serving to represent his status. In this case, the garment would be coeval with the rest of the grave goods.

In any case, the decorated fabric testifies though to the duration of the twill technique as a tradition regardless of whether it is older than the early 4th century BC, i.e. closer to the dating of the Daunian stelae, or coeval with the other funerary objects.

Decorated Daunian garments are also painted on a red-figure Apulian column *kratēr* attributed to the Painter of the Bari Orestes and dated to the second quarter of the 4th century BC (Figure 9), slightly later than the fabric of Ordona. In this scene, two youths carry paraphernalia for an offering including trays with cakes, a *nestoris* (an Italic type of jar) and a bunch of grapes, which suggests a Dionysian connection.[29] On their garments, there are swastikas, as on the fabric of Ordona, although they are not as richly decorated, and one wears a conical cap that is practically identical to those of the anthropomorphic stelae despite the latter being about three centuries older.

Cultural conservatism and the persistence of characteristics typical of this population are also reflected in other aspects, such as urban planning and the construction techniques of the houses. Indeed, in comparison with the other two Italic cultural areas of the Puglia Region (Peucetia and Messapia), in Daunia we do not see that transformation of inhabited areas which is clearly visible in those other territories from as early as the mid-6th century BC: the definitive transition to more solid dwellings is noted only in the Hellenistic period, while huts dated to the 5th and early 4th centuries BC were discovered next to houses with quadrangular rooms. The delay in the transformation of houses and construction techniques in Daunia may be linked to the limited or non-existent penetration of the Greek cultural element and the correspondingly greater Osco-Sabellian influence in the 5th and especially the 4th centuries BC.[30]

Returning to the fabric, the context of discovery raises other questions. The garment was not worn by the deceased but enveloped his bronze belts, although it was not necessarily linked to the belts themselves or to armour more generally. This contrasts with the woollen band (a warp-faced tabby) preserved under a bronze belt in Tomb 18 of Metaponto, a male burial dated to the 4th century BC (Figure 10), which is believed to have been the padding for the belt, as its width, clearly measurable thanks to the preserved selvedges, around 6.5 cm, is approximately the same.[31]

[29] Metropolitan Museum of Art n.d.
[30] Meo 2022b.
[31] Gleba 2013.

Figure 9: Apulian column *kratēr*, attributed to the Painter of Bari Orestes - *c.* 375-350 BC - with two young men identified as Daunians (photograph: New York, Metropolitan Museum of Art, 96.18.42, CC-BY 2.5).

Conclusions

Comparison with anthropomorphic stelae suggests that the Ordona fabric could be part of a garment typical of the Daunians, not necessarily linked to the warrior dress code but used both by men and women to represent their social status. On the other hand, we do not know if the buried man wore another item similar to the one found at his side but not preserved.

The stelae are representations of individuals that include their clothing, considered to be part of the Daunian identity. The most probable suggestion is thus that garments such as the one found at Ordona are part of the dress code that the Daunians used to represent their status on special occasions, without necessarily having any direct connection with funerary use. Indeed, the Ordona fabric was not worn by the dead but was wrapped around seven belts.

The discovery of more than one belt in the same tomb is not particularly common, although there are examples in Samnite contexts dated mostly to the 5th century BC.[32] Burying dead people with more than one belt may be symbolic rather than practical. To explain the presence of multiple belts in a single burial, various hypotheses have been proposed: they may represent offerings by a number of relatives of the deceased;[33] they may be an indicator of family status, especially in child burials; they may be war booty, taken from the enemy, with examples mainly found in Samnium;[34] finally, they may indicate the privileged status of the deceased within the community or at a supra-regional level. Angelo Bottini argues that the second belt found in a tomb in the Melfi area was war booty, considering that it must have been worn numerous times, being a precious object, and perhaps changed hands numerous times as a result of social relations.[35] Another possibility is proposed by Werner B. Johanowski, who believes that from the 5th century BC onwards, belts began to lose their value as symbols of distinction of the individual or social group and became markers of citizenship, as

[32] Graells i Fabregat 2007: n. 23.
[33] Romito 1995.
[34] Rebbufat 1962: 353.
[35] Bottini 1983: 52.

Figure 10: Wool band preserved under a bronze belt in Tomb 18 of Metaponto, 4th century BC (photograph: after Gleba 2013).

indicated by the presence of these elements even in children's graves.[36] However, the latter hypothesis does not seem plausible, at least in the case of the Ordona tomb.

Burials in which there is more than one belt are mostly marked by a wealth of weapons and metal objects in the funerary assemblage, and Matilde Romito has proposed that they served to further highlight the wealth and prestige of the deceased and his warrior role.[37] This hypothesis is consistent with what is proposed here for the Ordona garment as a means of self-representation of the status of the deceased.

The garment of T382, most probably a cloak, similar to those displayed on the engraved stelae, is strictly linked to the local culture, and its discovery demonstrates strong conservatism in terms of weaving techniques. The combination of the seven belts with the cloak is therefore most probably a mirror of the prestige and status of the deceased within Ordona society.

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[36] Romito 1995: 12.
[37] Romito 1995: 9.

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Blood-Splattered Tunics: Textile Trophies in the Funerary Iconography of Campania and Lucania, Italy, in the 4th Century BC

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Abstract: Italic men often are depicted in tomb paintings of the 4th century BC in southwest Italy as mounted and armed warriors returning victorious from disputes with neighbouring communities. These *ritorno del guerriero* scenes also appear in south Italian red-figure vase painting at the same time. The short tunic worn by all warriors in the region was a universal garment, but the tunics were distinguished by decorative borders and applied bands in a great variety of patterns and colours, indicating that there was much scope for personalisation and individualisation in military dress and possibly for indicating family or clan ties. The victors often hold aloft or display on their horses the bloodied tunics as trophies taken from the bodies of their slain enemies. These, along with captured elements of body armour, were symbols of success in battle and proof of the kill, but they also acted as signals of identity and status. After returning home, the victors may have deposited captured tunics and armour in sanctuaries as thank-offerings to the gods for assistance.

Keywords: elite textiles, fourth century BC, identities, southern Italy, tomb paintings, trophies, tunics

Introduction

In the 4th century BC, the Italic peoples in southwest Italy left no written records pertaining to their clothing and *habitus*, but occasionally they created visual records. During that century, members of the upper social strata in Campania and Lucania had themselves depicted in full dress in various situations from life in their funerary paintings.[1] These images were painted shortly before the deceased was laid to rest in a designated tomb and they were visible to family and neighbours during the funeral and until the burial was closed.[2] Representations of people in local dress also appear on contemporary red-figure pottery used in daily life and as provisions in graves. These iconographic sources are a valuable tool for exploring ethnic and cultural identities of the period expressed through dress, especially in view of the dearth of surviving textiles and the lack of texts. In particular, the paintings in chest tombs, semi-chamber tombs and chamber tombs inform us how people wanted to appear in a favourable and socially acceptable light and to be remembered in that way. Clothing, as part of social discourse, played an essential role in self-presentation in this context.[3] This pertains to women as well as men, but in the context of war and conflict it is particularly relevant for male dress that conveyed the elite status and military exploits of warriors.[4]

Italic men often are depicted as mounted warriors returning victorious from disputes with neighbouring communities, underscoring the importance of the cavalry nobility (Figure 1).[5] These *ritorno del guerriero* scenes appear in tomb paintings of the 4th century BC in Capua, Nola and Sarno in Campania and at Paestum in Lucania, and they appear in south Italian red-figure vase painting at the same time. The central item of male dress in all these areas and images was the short-sleeved, short tunic that was slightly longer over the groin; it is broadly similar everywhere in the region, but there are numerous differences in colours and patterns that must have been identity markers recognisable at the time.[6] In this paper, I focus on the tunics worn by the victors and on the tunics taken from the bodies of their slain enemies that were proudly held aloft by the victors on their return. These displayed tunics, along with captured elements of body armour, were symbols of success in battle and proof of the kill, but they also acted as signals of identity and status on various levels.

[1] The investigation of these tomb paintings is part of the author's research project entitled *Dress and Identity in Early Roman Southwest Italy*, funded by The Leverhulme Trust.

[2] Zuchtriegel 2017: 10-11. The crucial overviews of the painted tombs are Pontrandolfo and Rouveret 1992 and Benassai 2001.

[3] For recent research on clothing and identity in the Greco-Roman world, see, for example, Lee 2015; Rothe 2012a, 2012b and 2019; Carroll 2015 and 2020.

[4] Discussions of indigenous dress in southern Italy in the period immediately before and in the early years of the Roman conquest have focused largely on the depiction of the so-called Italic warrior; female portrayals have been overlooked, a situation which a new study aims to remedy: Carroll forthcoming.

[5] Nicolet 1962; Colivicchi 2009; Herring 2018. These are distinct from scenes in which warriors leave their home and wives to depart for battle; in these scenes, there are no trophies because the conflict has not yet taken place.

[6] Weege 1909a: 138 unconvincingly interpreted the slightly longer length over the groin as a sign of prudishness on the part of the wearers, but it may be that this part of the tunic was reinforced or padded to protect the genitals.

Figure 1: A victorious warrior is greeted by his wife in a tomb painting from Paestum. A bloodied tunic of a slain enemy is suspended from a bronze belt around the neck of the horse, while a captured bronze belt and shield are carried on the warrior's spears. Metropolitan Museum of Art, New York, inv. no. 1994.62 (photograph: Metropolitan Museum of Art, New York).

Samnite and so-called Samnite warriors and their kit

The images in tombs and on vases depict men dressed in clothing and armour that traditionally is known as 'Samnite', in reference to an ethnic group of people originally inhabiting the central mountainous region of southern Italy and later expanding to some extent into Campania to the west and Lucania to the south.[7] Neither Campania, nor Lucania, were part of the homeland region of the Samnites, but the influence of the military dress and weaponry of the Samnites can be detected there. Outside Samnium, these panoplies are perhaps better referred to 'so-called Samnite', a term that will be used in this paper.

Protracted wars between Rome and the Samnites took place between 343 and 290 BC, and because of these conflicts and contact on the battlefield it was the soldiers of the Samnite armies with which the Romans were most familiar.[8] A passage on the appearance

[7] Suano and Scopacasa 2013; Scopacasa 2014; Tagliamonte 2017.

[8] Roman historical sources on their battles against the Samnites will be referred to several times in this paper, simply because they provide useful insight into the preparation and stages of a battle, as well as the aftermath when prisoners and booty were taken. This does not imply that I equate groups in Campania or Lucania with the Samnites. On the Campani, see Mermati 2015; on the Lucani, see Wonder 2015; Isayev 2007: 9-26. Isayev firmly rejects the existence of a 'cohesive and well-defined group' that we might call Lucanians, instead characterising the region as being home to several communities that functioned both independently and collectively. For a discussion of the Samnite wars, see Cornell 2004. On Samnite armour, see Weege 1909b; Robinson 1995. Schneider-Herrmann 1996 seems to group Samnites and Campanians together, without distinction, and uses Campanian red-figure vase painting to discuss attire of men (mostly) and women based on this material.

of the Samnite soldiers is contained in Livy's *Roman History*,[9] written at the end of the 1st century BC or early 1st century AD. He briefly described the armour and coloured and variegated patterns of the Samnites squaring up against the Roman army in 308 BC, and he mentioned this aspect of their appearance again when they fought Rome at Aquilonia in 293 BC.[10] Whilst the Roman sources refer to the garments of Samnite soldiers, they do not describe the clothing and dress customs of peoples in Campania or Lucania, and so we are very fortunate to have the visual sources.

The richness in colour and ornamentation of elite clothing in southern Italy is attested, among other things, by occasional fragments of surviving textiles. Contemporaneous with the tomb and vase paintings are the finely decorated textiles found in a semi-chamber tomb of a warrior of the early decades of the 4th century at Ordona in Apulia, southeast Italy.[11] The elaborate textiles in this man's tomb, possibly from a cloak, were made of fine wool in a twill weave, with decorative bands either woven or embroidered in patterns of meanders, stars and arrows in paler linen thread.[12] This cloak was used to wrap seven broad belts of bronze sheet that belonged to the deceased. Contemporary visual images confirm the general popularity in southern Italy on both sides of the peninsula of a range of colours and patterns on embellished bands and borders on clothing. Such bands, either tablet woven, loom woven, or embroidered, were not only decorative, but also communicated an important message about the status and identity of the wearer.[13] They are technically complex, labour-intensive and time-consuming.[14]

Cloaks with decorated borders worn by warriors are not in evidence in the tomb paintings of southwest Italy, but one exceptionally elaborately clothed warrior on a fourth-century BC tomb painting in Capua wears a cloak that is impressively decorated all over with yellow, red and grey stripes as well as small yellow rosettes (Figure 2).[15] Occasionally in a battle scene or a scene of triumphal return a warrior wears a cloak in plain red or white (Figure 1).[16] The men's clothing for which we do have visual evidence of borders in various motifs and colours are tunics. Both the paintings and the objects buried with the dead confirm that these were worn with a broad bronze belt. These belts consisted of a thin sheet of bronze sewn onto a leather backing through small holes on the edges of the sheet.[17] The belt acted as a status symbol as well as an attribute of the warrior, and it is constantly paired with the other status symbol, the ornate tunic.[18] The value and personal nature of the bronze belt is indicated by the fact that many of the extant examples show evidence of frequent repair.

An examination of the surviving paintings from Campania and Lucania reveals that elite male military attire varied not only from community to community, but also from soldier to soldier. In Capua, the short white tunic is most prevalent; this is either plain or trimmed around the neck with red and is cinched in at the waist by a broad bronze belt.[19] Capuan warriors sometimes wear a so-called Samnite three-disc cuirass or a muscle cuirass, greaves and a helmet with feathers, horns or other adornment. The same outfit is portrayed in red-figure vase paintings from Capuan workshops.[20] Bronze belts like those in the images also are found in male graves at Capua.[21] At Cumae, there are no armed men depicted in the surviving tomb paintings, but warriors in vase paintings produced in the city are armoured and helmeted, as in Capua (Figure 3).[22] Grave goods in Cumae indicate that the bronze belt was an important item of male dress here too.[23] A set of helmet, muscle cuirass, belt, greaves and spear, bought in the 19th century for the Royal Armouries in Leeds, illustrates the panoply of body armour and weapons worn in the 4th century BC by a Cumaean warrior.[24] Warriors from Nola display the greatest variety in tunics, wearing them in red or blue with elaborate borders in white, blue, or red patterns, sometimes with tassels hanging from the short sleeves; these are combined with a broad bronze belt and occasionally with muscle cuirasses and helmets with feathers or horns (Figure 4).[25] The red tunic with scattered blue squares worn by a warrior from Nola-Cimitile in a late-fourth-century BC tomb painting may, perhaps, be a broad reflection of the colourful, variegated dress of the Samnites described by Livy.[26] The few men depicted in tomb paintings in Sarno-Galitta del Capitano (Tomb 1799) wear a plain

[9] Livy 9.40.1-3.
[10] Livy 10.40.13.
[11] Cavallerizza Tomb 382: Catalli *et al.* 2018.
[12] Meo, in this volume.
[13] Gleba 2017b: 1210-1211. Such decorated bands have a much longer history in the costumes of the region, as, for example, the depiction of similar bands and borders on the anthropomorphic Daunian stelae from the mid-7th to the early 5th century BC demonstrate: Norman 2016.
[14] Gleba 2017a.
[15] Benassai 2001: 37-38, cat no. C14, fig. 197. This same warrior wears a white tunic decorated all over in pale grey geometric motifs, including meanders.
[16] This can be worn, for example, over the shoulders to hang down the back (Paestum, Vannullo Tomb 3: Pontrandolfo and Rouveret 1992: 290, 397-398) or slung around the back and draped over both forearms (Paestum, Andriuolo Tomb 12: Pontrandolfo and Rouveret 1992: 100-101, 314-315).
[17] Suano and Scopacasa 2013: 399.
[18] Suano 2000.
[19] See, for example, Benassai 2001: 22-23, cat. no. C.1, fig. 4-5, 235.
[20] Trendall 1967: 406, no. 302, pl. 159.1, 160.2 (Libation Painter).
[21] Benassai 2001: 46, cat. no. C.26, fig. 37; 51, cat. no. C.27, fig. 45; 67, cat. no. C.31, fig. 80.
[22] Trendall 1983: 219, cat. no. 104i, pl. 25.6; Trendall 1967: 453, no. 6, pl. 175.1; Trendall 1971: 18, no. 49, fig. 49; Zevi *et al.* 2008: 283-284, fig. 2-3; Valenza Mele 1990: 25, pl. 19.3.
[23] Zevi *et al.* 2008: 271.
[24] Kaminsky 2023.
[25] Benassai 2001: 95-97, cat. no. N.4, fig. 208-211; 99-101, cat. no. N.8, fig. 212-221.
[26] Benassai 2001: 99-101, 200-204, cat. no. N.8, fig. 219.

Figure 2: A victorious warrior with an elaborate tunic and cape in a tomb painting from Capua (drawing: adapted by B. Carroll).

white tunic or, in one case, a turquoise-blue tunic with white and pale blue checks or stripes around the neck and on the hem (Figure 5).[27] Warriors in Paestum are dressed in white or red tunics with patterned or plain borders in red, white or black on the neckline, sleeves and hem, and a broad bronze belt; they wear armour, namely the Samnite three-disc cuirass or a muscle breastplate, greaves and a helmet with feathers and a crest (Figure 6).[28]

[27] Catalogo Generale dei Beni Culturali 2017.

[28] Tomb 12 and Andriuolo Tomb of 1937: Pontrandolfo and Rouveret 1992: 100-101, 314-316; 204-205, 352. A full set of armour and weapons

Figure 3: Trophies from the enemy include a bloodied tunic and two greaves suspended from two spears. Red-figure hydria from Cumae (photograph © Museum of Fine Arts, Budapest, László Mátyus).

Figure 4: Tomb painting from Nola-Cimitile depicting victorious warriors in coloured tunics. The warrior at the head of the procession carries the tunic of a slain enemy on his spear (photograph: Bridgeman Images, LRI4592510).

Figure 5: Painting in Tomb 1799 from Sarno-Galitta del Capitano, depicting a warrior in a blue tunic carrying a captured striped tunic and shield of an enemy (photograph: M. Carroll, by permission of the Ministero della Cultura, Direzione Regionale Musei Campania).

There can be little doubt that textiles such as these tunics communicated social status, and although they are largely similar in shape, length and form throughout southwest Italy, they are distinguished by borders and applied bands in various patterns and colours. There is no evidence for uniforms that, for example, all Nolan or Capuan soldiers wore, let alone for a national Campanian or Lucanian livery. The tunic itself is recognisable as so-called Samnite or common to various groups, but there was great variety. Some motifs, such as stripes, dots, or wave patterns might seem rather generic, but it is the evident variety in combination of motifs and colours result in widespread diversity (Figure 7).[29] The variety in tunics, particularly their decoration and adornment, conceivably could connote rank within the troops.[30] On a red-figure *kratēr* by the Astarita Painter from Capua, for example, two warriors with a short tunic, belt, helmet, spear and shield appear; the central male who is taller (and

can be found in many of the tomb assemblages of men, including Gaudo Tomb 2/1957 which contained a helmet, a muscle cuirass, a pair of greaves, two belts and various weapons: Pontrandolfo and Rouveret 1992: 380-385. For a three-disc cuirass and other armour at Paestum, see Porta Aurea 2 tomb: Pontrandolfo and Rouveret 1992: 363-364.

[29] Burns 2005: 360-368, fig. 72-79, has a handy overview of tunic patterns and colours in line drawings, which Fig. 7 here has taken further.

[30] This was suggested by Rouveret and Pontrandolfo 1983: 111.

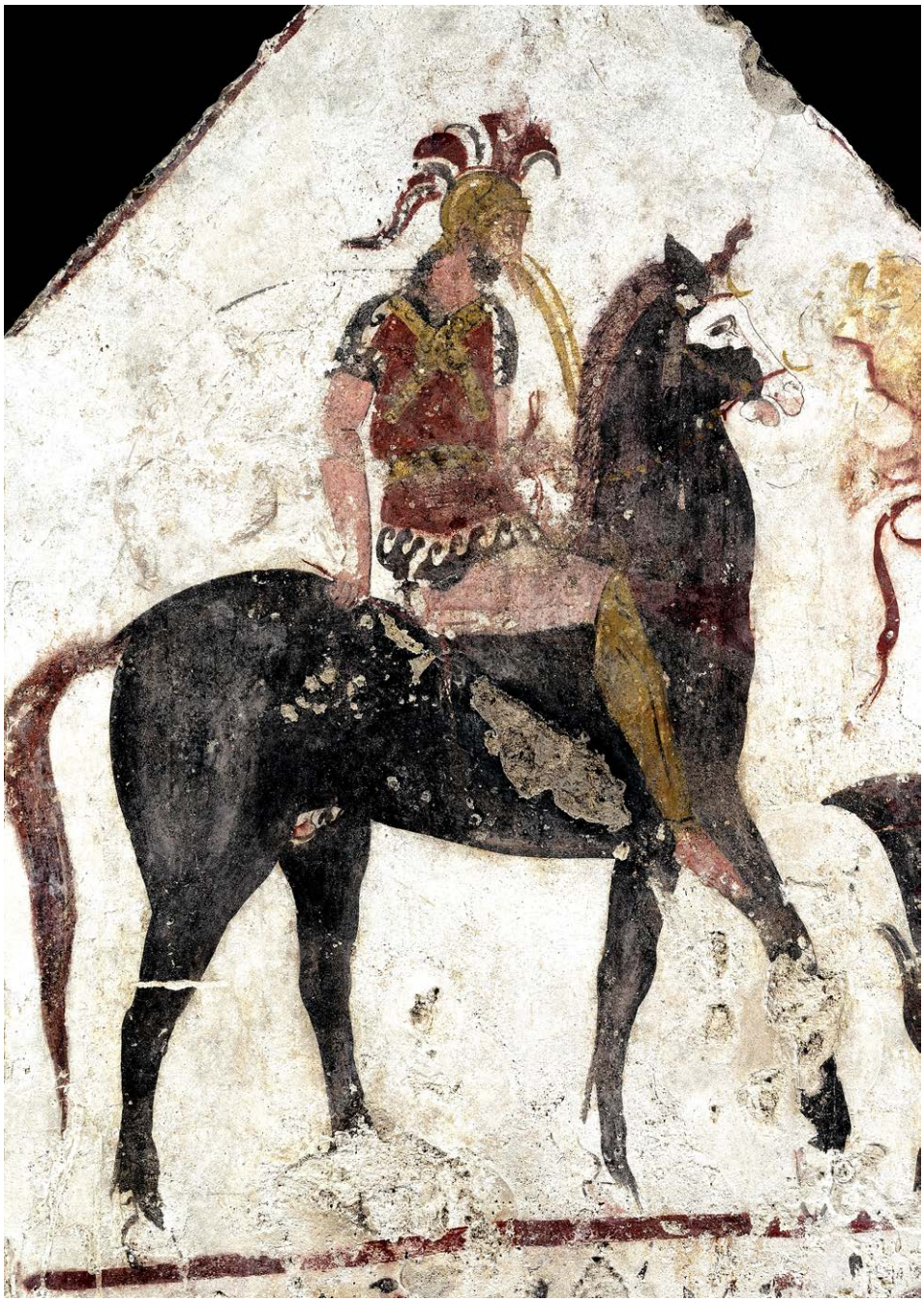

Figure 6: Painting in Tomb 58 from Paestum-Andriuolo showing a warrior in full panoply and dress (photograph: Alamy, Image ID: PPBCMF).

older?), to whom a libation is offered, wears a more ornately decorated tunic than his companion; their shields also vary in decoration (Figure 8).[31] The taller man also wears a fluttering cloak and greaves, unlike the other figure. This differentiation between status, and perhaps age, is apparent in many of the images in which one primary or older warrior seems to be the focus of attention.

It seems more likely, however, that the decoration we see was something personal to the wearer and his immediate surroundings. The men from individual communities in Campania and Lucania, especially from elite families, as depicted in the tomb paintings, will have been responsible for their own kit, including their tunics, just as the early Roman forces in the 5th and 4th centuries BC were.[32] Sometimes, totally unique motifs can be seen on tunics, supporting the idea of

[31] Shield adornment includes the depiction, for example, of geese, lions, star patterns, vegetal motifs, stripes and stars.

[32] Iancu 2025.

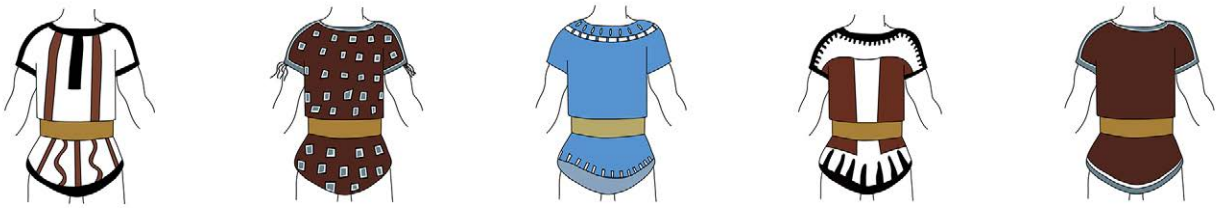

Figure 7: Selection of Campanian and Lucanian men's tunics. From left to right: Paestum, Nola, Sarno, Paestum and Nola (drawing: M. Kays).

Figure 8: Campanian red-figure *kratēr* depicting two warriors in decorated tunics, belts and armour (photograph: Sotheby's).

individualism and personalisation. This is the case, for example, with a white tunic decorated with red flying birds that is worn by a duelling man in Tomb 1 at Paestum-Arcioni; even his shield has heraldic birds (geese?) with flapping wings on it (Figure 9). I have demonstrated elsewhere that a woman's origin and membership in a particular community in southwest Italy could be recognised by her clothing and headdress that distinguished her from women from other communities, be it Nola, Sarno, Capua, Cumae, or Paestum; but, in addition to this, the patterns and motifs on female clothing of the period could be important markers of distinction and even of kinship or specific to family groups.[33] If identities were formed and expressed through clothing on a relatively local, rather than on a large scale or 'national' level, which we can demonstrate for women, the same could be true of male military dress in which there was much scope for personalisation.

[33] Carroll forthcoming.

Figure 9: Paestan man wearing a white tunic decorated with red birds on the torso and carrying a shield adorned with geese, from Tomb 1 at Paestum-Arcioni (photograph: Alamy, Image ID: 2T112W5).

Textile trophies of war

The tunic as a trophy often accompanies other spoils of war such as a shield, greaves, or spears of a killed opponent, but it is the combination of tunic and broad bronze belt that is most symbolic of the elite warrior on either side of any conflict. This explains why these items in particular are displayed proudly by the victor as proof of the kill of a perhaps equally elite opponent who once owned them.

The captured tunic is displayed in 30 tomb paintings in one of two ways (Table 1). It is either slung over a spear carried by the mounted victorious warrior on his shoulder, with the spear pushed through the arm and neck holes, or it is suspended from a captured enemy bronze belt around the neck of the victor's horse or simply tied around the horse's neck.

The tunic hanging from a spear appears 16 times in all, seven times at Capua, six times at Paestum, twice in the same tomb in Nola-Cimitile and once at Sarno.

Table 1: Overview of tomb paintings with depictions of victorious warriors returning with textile trophies. P-R = Pontrandolfo and Rouveret 1992.

Tunic placement	Site	Tomb	Clean	Bloodied	Other trophies	Source	Fig. here
Tunic / spear	Capua	unknown		yes	belt	Benassai C.13	
	Capua	unknown		possibly	belt, shield	Benassai C.15	
	Capua	unknown	yes		belt, shield, greave?	Benassai C.16	
	Capua	unknown		yes	belt (also bloodied)	Benassai C.17	
	Capua	unknown		yes	belt	Benassai C.18	
	Capua	Ponte S. Prisco T3	?	?	no	Benassai C.26	
	Capua	Ponte S. Prisco T13	yes		belt	Benassai C.30	Fig. 10
	Nola	Cimitile	yes		belt	Benassai N.8	Fig. 4
	Nola	Cimitile	yes		no	Benassai N.8	
	Sarno	Galitta Capitano T1799	yes		shield		Fig. 5
	Paestum	Andriuolo T61		yes	shield	P-R 118-119	Fig. 11
	Paestum	Andriuolo T86	yes		belt	P-R 162-163	
	Paestum	Andriuolo T1937	yes		belt, shield	P-R 204-205	
	Paestum	Andriuolo T114		yes	shield	P-R 177	
	Paestum	Vannullo T3	yes		shield + unident. object	P-R 290	
	Paestum	unknown		yes	greaves		Fig. 13
Tunic / horse	Nola	Via Seminario		yes	belt	Benassai N.4	Fig. 12
	Nola	Via Seminario		yes	belt	Benassai N.4	
	Sarno	Galitta Capitano T1799	yes		shield carried		Fig. 5
	Sarno	Galitta Capitano T1799	yes		no		
	Paestum	Andriuolo T61		yes	belt?	P-R 118-119	
	Paestum	Andriuolo T86		yes	belt; tunic, belt carried	P-R 162-163	
	Paestum	Agropoli T11/1967		yes	belt; shield carried	P-R 248	
	Paestum	Gaudo T1/1972		yes	belt; shield carried	P-R 257	
	Paestum	Sequestro Finanza T1		yes	belt; belt, shield carried	P-R 298	
	Paestum	Vannullo T4		yes	belt, greave, shield carried	P-R 286-287	
	Paestum	Laghetto TLXIV		yes	belt; shield carried	P-R 209	
	Paestum	? NY MMA 1994.62		yes	belt; belt, shield carried	MMA website	Fig. 1
	Paestum	Spinazzo Tomba Finanza		yes	belt	D'Angelo 86	
	Paestum	Spinazzo Weege 31	?	?	belt	D'Angelo 81	

The Capuan examples all date to the second half of the 4th century, particularly to the last quarter; the other examples from Nola, Sarno and Paestum range from *c.* 375 BC to the early 3rd century. The textile trophies in Capua usually are quite ornate, consisting of a white tunic with red borders, or with vertical stripes, meanders and dots of various colours, including red, yellow, grey and blue (Figure 10); three of these are clearly blood-spattered. The suspended tunics at Paestum are either plain white or white with red or black bands; three are blood-spattered (Figure 11). The captured tunic in Sarno is red and white striped.

Figure 10: Returning warrior from Capua carrying a tunic in red, blue and white stripes and a belt taken from an enemy, Tomb 14 Ponte S. Prisco (photograph: M. Carroll, by permission of the Museo Archeologico dell'Antica Capua, Santa Maria Capua Vetere).

Figure 11: Detail of a painting in Tomb 61 at Paestum-Andriuolo, showing a warrior with bloodied tunics taken from slain enemies on the horse's neck and on carried spears (photograph: Alamy, Image ID: HHB6XX).

The most ornate captured tunic appears in the tomb painting from Nola-Cimitile, dating to *c.* 330-320 BC. The male warrior walking at the head of a procession here carries a white tunic with large red and blue panels on the body and with red tassels hanging from the sleeves and hem of the garment (Figure 4). All but three of these textile trophies are combined with a captured belt hanging from the warrior's spear.

The tunic hanging from a captured bronze belt around the neck of a horse, or simply tied around its neck, appears 14 times, most commonly at Paestum (with 10 examples), Nola-Via Seminario (twice in one tomb, Figure 12) and in Sarno Galitta del Capitano (twice in one tomb) in the period from shortly before the middle of the 4th century to the early 3rd century BC. Most of these tunics are white, sometimes with red trim, and have splashes of blood on them (Figure 1), although the examples at Sarno do not and the nineteenth-century drawing of a returning warrior at Paestum-Spinazzo is very basic and this detail is not clear.[34] These have been misinterpreted as a caparison or protective cloth for the horse; accordingly, the blood stains on the textile was thought to be oozing from a wound on the chest of the horse.[35] However, the bronze belt around the horse's neck is so clearly a man's belt that it is hard to imagine that the textile trophy hanging from it should not be a man's tunic, as this is the typical combination of attire stripped from an enemy. At Paestum, there are double signs of triumph for some individual warriors in that a bloodied tunic is draped from the horses' neck and a second one is carried on a spear by the victor on the same horse (Figure 13).[36]

In contemporary Campanian red-figure scenes on ceramic vessels made in Capua and Cumae, the *ritorno del guerriero* also is present, occasionally including the depiction of trophies and spoils of war. In fact, some of these scenes relay the moments of battle when prisoners were taken captive and their equipment confiscated. On a red-figure *hydria* by the Triumph Painter in the Museo Campano in Capua, for example, two warriors on foot each have a spear from which trophies are suspended, a shield and greave in one case,

[34] Weege 1909a: 117-118; D'Angelo 2017: 81.

[35] Benassai 2001: 97.

[36] Andriuolo Tomb 61: Pontrandolfo and Rouveret 1992, 118-119, 324-326. Andriuolo Tomb 86: Pontrandolfo and Rouveret 1992, 162-163, 339-340.

Figure 12: Victorious warrior in a blue tunic with a bloodied enemy tunic on his horse's neck, Tomb Nola-Via Seminario (photograph: M. Carroll, by permission of the Ministero della Cultura, Museo Nazionale Archeologico di Napoli).

and a tunic, belt and helmet (?) in the other; a disarmed and bound prisoner who has been stripped of armour is led away on the right (Fig. 14).[37] On another red-figure *hydria* from Cumae by the Boston Ready Painter, various individuals at different points in a battle are portrayed.[38] Some soldiers engage in single combat with each other, two others lie dead without their armour or weapons, and a third soldier retreats carrying a spear from which a captured belt and tunic dangle. After the battle, a warrior returns on his horse to his family and community, as shown on a *hydria* from Cumae in Budapest (Figure 3).[39] This warrior has brought home two spears with two greaves and a bloodied tunic decorated with a swastika, a motif that is known also on a tunic painted on the walls of a tomb at San Nicola di Albanella near Paestum.[40] The spoils seem to be

[37] Weege 1909a: 138-139, fig. 15; Mingazzini 1935: 5-6, pl. 7-8.
[38] Zevi *et al*. 2008: 283-284, fig. 3.
[39] Trendall 1967: 480, no. 289, pl. 186.3 (attributed to the CA Painter); Szilágyi 1981: 98-101, pl. 46.1, 46.4 (attributed to the LNO Painter).
[40] In the Museo Archeologico Nazionale di Napoli, recorded by the author March 2023. The swastika also appears on tunics and cloaks in painted tombs in Capua: Benassai 2001: 24, cat. no. C3, fig. 7; 61-62,

Figure 13: Returning mounted warrior whose valour is represented by the bloodied tunics on his spears and his horse's neck, Paestum Tomb. The slain warrior's greaves are also suspended from the spears (photograph: Alamy, Image ID: RYEHKM).

suspended above and behind the warrior, as if fixed to a wall, but objects often 'float' in the background of scenes on vases (see below), so this is uncertain.

The tunics stripped from the bodies of the enemy almost always are different from the ones the victors wear, although sometimes the quality and preservation of the paintings make it difficult to see great detail. The Nola-Cimitile painting (Figure 4) is the clearest evidence for the great diversity apparent in the tunics worn by Nolan soldiers, and the very well-preserved and highly ornate captured tunic carried by the lead man in the procession is unlike any of those worn by the returning soldiers.

Captured prisoners and seized horses of the enemy forces, depicted on a few tomb paintings and vases, are likely to have been of greater economic value than trophies. But metal spoils such as weaponry, bronze belts and other items had both monetary and symbolic value. These could be dedicated in a sanctuary as a thank offering, as Livy tells us the Romans did with their Samnite spoils;[41] he specifically refers to the splendid gold- and silver-embossed shields of the Samnites as, in fact, 'spoil rather than armour....soon becoming disfigured amid blood and wounds', and he refers to 'heaps of bodies and splendid armour' on the battlefield, ripe for the taking.[42] Several of the depicted shields and belts taken as booty have been damaged by driving a spear right through them, so they do appear as spoil rather than as objects targeted for reuse (see Figure 3, for example). At the sanctuary at Pietrabbondante, where Samnite communities centrally gathered possibly already from the late 5th century BC, helmets, belts and weaponry of the 4th and 3rd centuries BC were recovered, some of the pieces of equipment, such as three-disc cuirasses and helmet cheek-pieces, having been fixed to a support with nails for their display.[43] Other dedications at local shrines, as yet undiscovered, are likely. But textile trophies that might have been deposited at Pietrabbondante or in any sanctuary in Campania or Lucania do not leave a trace archaeologically. Metal equipment could also be melted down and turned into something else, as the Romans did with Samnite armour captured in 293 BC, transforming breastplates, greaves and helmets into a statue of Jupiter in Rome.[44]

cat. no. 30, fig. 205.

[41] Livy 10.46.

[42] Livy 9.40.4, 14.

[43] Tagliamonte 2002-2003; La Regina 2018.

[44] Plin. *HN* 34.18.

Figure 14: Red-figure *hydria* from Capua depicting two soldiers with spears from which trophies – shield, greave, tunic, belt and helmet – are suspended. A disarmed and bound prisoner who has been stripped of armour is led away on the right (photograph: Bridgeman Images, DGA2564286).

On the other hand, trophies potentially might have been used to decorate the homes of the elite who had shown valour in battle, if we look to Republican Rome for a comparison. Livy referred to those noble Romans chosen for the new senate after the battle of Cannae in 216 BC who 'had the spoils of an enemy set up in their houses' (*spolia ex hoste*).[45] Pliny the Elder, too, mentions how the ancestors of Rome fastened spoils taken from the enemy outside their houses and around their doorways.[46] These *spolia*, primarily captured shields, remained in sight and were not removed, even if the house changed ownership, eternally celebrating a triumph; the normal place for the display and consecration of *spolia*, however, was in the context of public architecture and spaces.[47] There is no visual evidence of displaying *spolia* in houses in the tomb paintings of the 4th century BC, but Campanian vase painters from Capua sometimes depict windows and what appear to be half-shields and other motifs (rosettes, garlands, *phialai*) at the top of the painted panels showing the departure (rather than the return) of the warrior and other non-military activities (see Figure 8).[48] Whether these half-shields really are meant to allude to *spolia* set up in domestic settings, perhaps from previous battles, we cannot tell. Since they appear also floating in the background of scenes where the warrior clearly is outside a building and standing next to his horse or leaning against a rock or standing on uneven terrain, however, a certain amount of scepticism about the half-shield or shield as a trophy in a domestic context is warranted.[49]

The tomb paintings in southwest Italy show beyond doubt that the decorated tunics were valuable items of dress, and it is, therefore, not surprising that they frequently were taken as a prize of war. They were indicative of victory over a foe slain in close personal combat, and they had a great symbolic value for that

[45] Livy 23.23.6.
[46] Plin. *HN* 35.2.7.
[47] Rawson 1991; Welch 2006 (who includes also non-military booty); Rutledge 2012: 123-158.
[48] Trendall 1967: 400, no. 273, pl. 156.4; 406, no. 301, pl. 160.1 (Astarita Painter); Trendall 1989: 165-166, fig. 299, 301 (Astarita Painter, Libation Painter).
[49] See, for example, a red-figure vessel by the Manchester Painter in Naples: Trendall 1967: 415, no. 362, pl. 167.3-4; and others by the Libation painter in Paris and in Santa Maria Capua Vetere: Trendall 1967: 406, no. 301, pl. 160.1; 406, no. 300, pl. 159.4-5.

reason.[50] Samnite soldiers stripped of their weapons and battle dress were led under the yoke of Rome in 307 BC, for example, and were 'dismissed wearing a single garment', implying they were left with a simple garment with little or no value, unlike the costly decorated textiles they wore in combat.[51] It may also have been the case in conflicts of the 4th century BC among neighbouring groups in southwest Italy that less valuable garments remained on the living prisoner of war or on the corpse of the vanquished.[52] But what happened to the textile trophies, as opposed to metal arms and armour, like those displayed in the tomb and vase paintings? Given that the tunics are personal items that distinguished the wearer from others, it is unlikely that they would have been worn or reused by the victor after removal from an enemy corpse, especially if they were blood-stained or damaged. There is no surviving evidence to suggest that non-metal spoils, such as captured tunics, were attached to the houses of the victors and they certainly would not have survived to 'eternally' celebrate a triumph, as Pliny the Elder writes in the context of Republican Rome (see above). However, we know from Greek and Roman written and visual sources that clothing and textiles of many kinds were deposited in sanctuaries as thank-offerings marking the successful transition from one stage in a life course to another, such as childbirth, the dedication of a child, or the passage from puberty to adulthood.[53] The funerary iconography in Campania and Lucania cannot tell us with certainty what happened to the captured and displayed tunics and textile spoils of war once they were brought home, but it is strong possibility that they were dedicated to the gods in thanks for a successful outcome in battle.

Conclusions

In the paintings in their tombs, elite warriors in Campania and Lucania celebrated their victory over the enemy for eternity by being depicted in their military garb and weapons and proudly displaying the captured tunics and arms stripped from those they killed in battle. Elite male military attire varied considerably. The short tunic was a universal garment worn by men everywhere, but tunics were distinguished by decorative borders and applied bands in a great variety of patterns and colours, indicating that there was much scope for personalisation and individualisation in male military dress and, perhaps, for indicating family or clan ties. The tunic and the broad bronze belt that we see in the visual depictions in tombs and on ceramics were symbolic of the elite warrior on either side of any conflict, explaining why both items are displayed proudly by the victor as proof of the kill of an opponent who once owned them. Captured tunics slung over a spear carried by the mounted victorious warrior or suspended from the neck of the victor's horse are often blood-spattered, having been stripped from the body of an enemy foe. These textile trophies were symbolic of a man's valour and prowess in conflict. They were keenly displayed after the triumph and possibly deposited as thank offerings for military success in relevant sanctuaries. Although no trace of them survives in such contexts, unlike captured metal weapons and armour, the images preserved in tomb and vase paintings in the 4th century BC attest to the role and value of decorated elite textiles as status garments and as a display of personal identities.

[50] Gleba 2014: 83-89.
[51] Livy 9.42.7.
[52] Iancu, in this volume.
[53] Cleland 2005; Niels 2009; Brøns 2015 and 2016; Carroll 2019: 14-15.

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The Proto-Lucanian Hydria from the Tomb 2/1994 of Gravina-Botromagno and the Polysemy of Heroic Textiles: *Symbola* for the Peucetian Elites

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Abstract: The present study is an interpretative analysis focused on the textiles worn by the combatants in a large battle scene depicted on a red-figure *hydria* of proto-Lucanian origin from the last quarter of the 5th century BC, attributed to the Amykos Painter now part of the collections of the Fondazione Ettore Pomarici Santomasi of Gravina di Puglia. The vessel was found in the semichamber tomb known as 2/1994 in the site of Botromagno, settled near the urban settlement of Gravina di Puglia, in Peucetia, a central subregion of Apulia, the southeastern region of the Italian Peninsula. Previous analysis interpreted the large battle scene on this vessel as an image echoing the aristocratic ideology of the members of the Italic privileged class. The depiction of the combat has also been linked to Homeric literature. Starting from these interpretations, a detailed analysis of the large battle scene suggests that the textiles can be described as polysemic details. Hence, the textiles are depicted as specific narrative elements of the figural decoration of a luxury product chosen in order to celebrate a wide range of values of the members of an Italic aristocracy, appreciating luxury products linked to the most recent artistic and cultural developments taking place in Apulia and Lucania at the end of the 5th century BC.

Keywords: Amykos Painter, battle, Gravina-Botromagno, Homeric warfare, *hydria*, Peucetia

Introduction

This paper is structured to present an accurate multidisciplinary analysis focused on the images of textiles that are part of a large battle scene represented on the shoulder of a proto-Lucanian red-figure *hydria*. The work is attributed to the Amykos painter, dated between 430 and 410 BC, and found in the inner part of Peucetia region,[1] the central subregion of Apulia, the southeasternmost region of the Italian peninsula. This research is articulated through a comprehensive exploration, starting with an in-depth examination of the structure and the decorative apparatus of the funerary context where the proto-Lucanian red-figure *hydria* was found. The vase was part of the funerary assemblage found in tomb 2/1994 located at the site of Botromagno, near the urban settlement of Gravina di Puglia.[2] The painted *hydria* is currently part of the archaeological collections of Ettore Pomarici Santomasi Foundation's Museum at Gravina di Puglia,[3] a settlement located about 61 kilometres southwest from the city of Bari.[4]

This paper seeks to provide a study by outlining a short summary of the Peucetian military mindset and delineating various observations concerning the archaeological structures and contexts associated with the vessel, the craftsmen who produced and decorated the vase and the clients associated with this artifact. Additionally, it aims to provide an iconographic analysis of the battle scene depicted on the vase. Also, the Homeric excerpts commonly linked to the battle scene on the vase are critically reviewed. Furthermore, this paper discusses new associations between Homeric texts and the fight represented on the *hydria*. Then, a particular emphasis is placed on the representations of clothing. Finally, I provide a new interpretative reading of the textiles that are part of the equipment of the combatants depicted on the upper register of the vessel. The depictions of clothing on the vase are described as the outcome of an artistic process aiming to create visual markers that communicate a specific narrative as well as symbolic and ideological messages.

Before the iconographic analysis of the large battle scene depicted on the upper register of proto-Lucanian red-figure *hydria* from tomb 2/1994 from Gravina-Botromagno, I proceed to outline a summary on the Peucetian military background followed by a synthesis about the monumental graves and the luxury funerary assemblages as a source of information linked to the aristocratic ideology and mindset of the Apulia region at the end of 5th century BC. This part is followed by an overview of the structures, the decorative apparatuses and the grave goods of the tombs found at the site of

[1] Ciancio 1996: 407; 1997: 102-111; 1998; 2005: 48; 2010: 388; Bartolo 1997: 205-206; Depalo 2010: 396-399; Montanaro 2015: 64-66; 2018: 29-30.

[2] Montanaro 2018: 31. Following the existing academic literature in Italian about these locations, this contribution will refer to these geographical areas with the expression 'Gravina-Botromagno'.

[3] The vase is described as a proto-Lucanian red-figure *hydria* attributed to the Amykos Painter, from the tomb 2/1994 of the necropolis of Gravina-Botromagno, 425-400 BC, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76084, Gravina di Puglia. Montanaro 2018: 30.

[4] Bartolo 1997: 205-206; Ciancio 1997: 102-111.

Botromagno. Subsequently, a synthesis of the activity, the artistic features and the legacy of the Amykos Painter and his workshop will be provided. Then I offer a short description of the decorative apparatus of the proto-Lucanian red-figure *hydria* found in tomb 2/1994, with hints to a link to the potential narrative connections interwoven between the two-figure registers that embellish the red-figure vessels. The focal point of the paper shifts towards an accurate description of the large battle scene depicted on the upper register of the vase. A critical review of previous scholarly studies pertaining to the large battle scene is then provided. Furthermore, the paper delves deeper into the intertextual connections between the battle scene and the military models described in Homeric literature, enriching the interpretation and understanding of the artistic representation. Additionally, the representation of textiles within the battle scene is scrutinised in detail. The conclusion of the paper lies in a final synthesis highlighting the polysemic nature of textiles part of the equipment of the combatants represented on the upper level of the proto-Lucanian red-figure *hydria* from tomb 2/1994 from Gravina-Botromagno. This wide-ranging analysis aims to offer a new critical glimpse into some specific iconographic details of a luxury product that resulted from the interactions between the artists, the clients and the cultures of southern Italy during the last quarter of the 5th century BC.

The Peucetian aristocracy: a receptive indigenous privileged class in central Apulia

Prior to delving into the analysis and exploration of the themes within this paper, I will first present some methodological details. Initially, I will employ the designations 'indigenous' and 'Italic people' to denote the non-Greek ethnic groups located in Peucetia. Those Greeks settled in southern Italy will be referred to as 'Italiotes'. The ethnic groups inhabiting mainland Greece will be denoted as 'Hellenic'. Additionally, other *ethnē* mentioned in this paper, such as the Macedonians and the Epirotes, will be identified by their respective ethnonyms. Previous studies often describe the Peucetian aristocracy from a perspective close to the Hellenic culture, seeing the elites of central Apulia as linked to activities and practices connected to the Greek costume. These studies point to the 'Hellenization' of the Peucetian aristocrats and Peucetian settlement identified by the term 'poleis'.[5] This perspective led scholars to describe the collective events including the consumption of wine and food as 'symposia',[6] the development of the military traditions in Peucetia as deeply influenced by the Greek warfare and athletic costumes[7] and the Dionysian images found in Peucetia as linked to the Greek cult of Dionysus.[8] In this study I prefer to describe the Peucetian more cautiously as an *ethnos* showing a cultural identity receptive and accustomed to the 'selective acquisition'[9] of cultural elements, practices, items and images perceived as belonging to external cultures. Hence, I will aim to describe Peucetian activities employing an approach that centers on their social and cultural reality. Accordingly, preference is given to terms and concepts that reflect their specific practices, such as social gatherings for the consumption of food and wine among aristocrats, rather than relying predominantly on terms and concepts associated with Hellenic traditions and practices, such as the symposium. Due to the lack of information about the terms and expressions linked to the Peucetian deities associated to the consumption of wine and to mythical characters related to this sphere, I will refer to these with the Dionysian phraseology 'temporarily borrowed' from the Hellenic culture. I will also stress the presence of heterogeneous forms of expression, hybrid material manifestations and elaborated images resulting from the cultural, commercial, military and political interactions among the Peucetian elites and the other ethnical groups between the 6th and the 4th century BC.[10]

Peucetian warfare ideology: a summary (6th-4th centuries BC)

The main topic of this paper requires a short digression regarding the development of the Peucetian warfare ideology mostly testified by tombs, grave goods and images dated between the end of the 6th and the 4th century BC.[11] During the Archaic age, between the end of the 6th century and the first two decades of the 5th century BC, the funerary contexts in Peucetia demonstrate the high status of people part of the indigenous elites, mostly thanks to monumental tombs located in noticeable locations of the settlements,[12] to luxury funerary assemblages and to the display of military equipment in the graves.[13] As it has been stressed by Ciancio, the many types of items found in Peucetian funerary contexts may suggest various means of acquisition, including purchases, gifts, or acquisition through warfare.[14]

[5] Schierup 2014: 202.
[6] Ciancio 1997: 102; Roscino 2009: 496-497; Ciancio 2010b: 227; Montanaro 2015: 77-81; 2018: 26-28.
[7] Ciancio 1997: 108-112; Montanaro 2015: 77-81; 2018: 26-28.
[8] Ciancio 1997: 102; Montanaro 2015: 77-81; 2018: 29.
[9] This expression has been suggested to me by Giovanni Mastronuzzi to whom I express my sincere gratitude.
[10] The importance of this perspective has been stressed by Ciancio (2010: 236).
[11] About this topic it is to mention the detailed monograph of Montanaro (2015).
[12] Ciancio 2010b: 228-229, 231; Montanaro 2015: 105.
[13] Ciancio 2010b: 228; Montanaro 2015: 37.
[14] Ciancio 2010b: 228; Montanaro 2018: 33.

The most common offensive weapon linked to the military indigenous culture in Peucetia is the metal javelin, while swords are more rare and thrusting spears are linked to the Hellenic military models.[15] Metal helmets, usually described as Corinthian helmets and put in connection to the activity of craftsmen linked to the Hellenic culture, were claimed to be found in tombs at Ruvo, Gioia del Colle and Monte Sannace while three helmets coming from documented archaeological contexts came from graves located at Bitonto, Conversano and Ginosa.[16] Scholars note that the few swords found in Peucetia were associated with funerary assemblages, demonstrating different levels of wealth.[17] It has been argued that the swords were placed in graves to convey a wide range of symbolic messages linked perhaps to the pride of the indigenous chieftains[18] or possibly to a more articulated hierarchical structure of the indigenous military system.[19] Another possibility is the presence of a complex hierarchy of figures linked to military power settled in different indigenous contexts characterised by a different level of economic and cultural development. Moreover, scholars have suggested that the swords can be linked to combat, perceived as an 'heroic' practice, usually seen as a duel between two skilled combatants.[20] This hypothesis is strengthened by images showing compositional schemes including two horses and a rider near combatants fighting in a 'heroic duel' on foot, spread from the 6th century BC in the western contexts such as Etruria and the colonies of Sybaris, Metapontum and Tarentum.[21] It is worth stressing that the mounts are depicted as mostly having a logistical role since the horses are used to move and to reach the battlefield before engaging in combat on foot.[22] The best known iconographical examples of this development were found in inner Lucania: I am referring to the depictions on the terracotta slabs of Serra di Vaglio[23] and the pottery frieze part of the decorative apparatus of the monumental building at Torre di Satriano[24] that were placed in connection to artistic models developed in Corinth and in Laconia.[25] Moreover, other depictions on vessels coming from Monte Sannace, Ginosa-Passo di Giacobbe and Montescaglioso also demonstrate the prestige of the combatants depicted as mounted warriors.[26] The exceptional funerary assemblage found at Ginosa included a luxury panoply attributed to a horseman and a bronze set of vessels for the practice of the banquet, realised by workshops from different cultural and geographical contexts.[27] However, between the first half of the 6th century and the beginning of the 5th century BC, the privileged status of some aristocratic figures is also expressed through funerary assemblages including items linked to the possession of two horses, such as horse harnesses and chariots, further shown by the findings from Ginosa, Conversano and Ruvo di Puglia.[28]

Hence, the outline of the archaic Peucetian society was characterised by few aristocratic figures seen as warriors fighting on foot and linked to horsemanship.[29] The conflict is represented as a monomachy between heavy infantrymen that are indirectly supported by subordinate figures. However, it is also important to remember that Peucetian communities show different variants of funerary rites, attesting to a complex and articulated cultural context.[30]

The archaeological evidence from the 6th century BC on the acropolis of Monte Sannace has been used to argue for the presence of a complex social structure with a small number of privileged people at the top, linked by bonds of kinship and connected with private rites and religious beliefs also linked to the deceased.[31] The prominence of these figures is also emphasised by the architectural and funerary structures realised by these characters in a position towering over the surrounding territory.[32] Furthermore, the persistence of the authority held by the local ruling class is implied by the monumentalization of the structures located on the acropolis during the Hellenistic period.[33] In contrast, the coexistence of groups of privileged people in Peucetia is attested by the funerary settings dated between the 6th and the 4th century BC near the settlement of Gravina. They are situated both within the urban area, notably atop the hill of Botromagno (as the graves of Monte Sannace),[34] and beyond its confines, as demonstrated by the necropolis identified in the area known as 'Padre Eterno'.[35] Hence, scholars argued that these funerary contexts point to a view of a Peucetian society ruled by a small class of aristocratic figures consisting of many small groups of individuals. These are shown by the realisation of distinct funerary areas grouping the figures linked by family relations.[36] Thus, the finding at Monte Sanance and Gravina hints

[15] Ciancio 2010b: 225-226; Montanaro 2015: 37-38.
[16] Ciancio 2010b: 226; Montanaro 2015: 41-42.
[17] Roscino 2009: 490-491; Ciancio 2010b: 228.
[18] Roscino 2009: 490-491.
[19] Ciancio 2010b: 226.
[20] Roscino 2009: 490; Ciancio 2010b: 228.
[21] Roscino 2009: 491-492.
[22] Roscino 2009: 494-495; Ciancio 2010b: 228.
[23] Lo Porto and Ranaldi 1990; Setari 2009: 239-245.
[24] Osanna 2009: 157-175; 2019: 126-131. About the élite residence, see the contributions in Osanna *et al.* 2009 and Osanna 2019: 103-158.
[25] Roscino 2009: 491.
[26] Ciancio 2010b: 228; Montanaro 2015: 43-44.
[27] Ciancio 2010b: 228; Montanaro 2015: 47-48.
[28] Roscino 2009: 491-492; 2010b: 227-228; Montanaro 2015: 40-43.
[29] Ciancio 2010b: 229; Montanaro 2015: 48.
[30] Ciancio 2010b: 229; Montanaro 2015: 48.
[31] Ciancio 2010b: 230; Gargano 2022: 221-222.
[32] Ciancio 2010b: 230; Montanaro 2015: 52, 109-110; Gargano 2022: 221-222.
[33] Ciancio 2010b: 231; Montanaro 2015: 28-29, 48-54; Gargano 2022: 226-227.
[34] Montanaro 2015: 109-110.
[35] Ciancio 2010b: 231-232; Montanaro 2015: 60-67.
[36] Ciancio 2010b: 233-234; Montanaro 2015: 68.

to the fact that between the 6th and the 4th century BC Peucetian settlements were ruled by the members of a heterogeneous aristocratic class with different inner structures and articulations.

Ciancio stressed that from the 5th century BC the thrusting spear gradually became part of the military equipment in Peucetia, probably demonstrating the widening of the social composition of the combatants.[37] Hence, scholars argued that the importance of a lower class of warriors fighting on foot rose in this time.[38] It is worth remembering that the few grave goods found in a tomb near Bitonto included a metal arrowhead, hinting to the presence of combatants skilled in archery in Central Apulia.[39] Moreover, the number of swords and greaves found in Peucetian funerary contexts decreased during the first half of the 5th century BC.[40] It is also useful to recall that some members of the Peucetian elites testify their military power placing the metal equipment linked to horses and chariots in their tombs.[41] Therefore, one could posit that in the early years of the 5th century BC, there was coexistence within the Peucetian aristocracy of individuals following different military traditions. Also, the depictions on the luxury items found in the graves often portray the heroic deeds of mythical figures, athletic scenes, or compositional schemes linked to the figural theme of 'the departure of the warrior'.[42] The choice of these symbolical depictions appears to be deliberate rather than coincidental, suggesting a conscious selection closely tied to the deceased's many roles and activities in life.[43] This images aligns with the symbolic meaning of the objects placed with the deceased in the tomb in order to represent their identity as elites and warriors during their lifetime, placed as such to gain access to a privileged afterlife akin to that of the heroes of the Hellenic myths.[44]

From the mid-5th century BC the exhibition of military items in funerary assemblages in Peucetia demonstrate the presence of light armed infantrymen and horsemen, which are able to be seen thanks to the graves found near the settlement of Gravina di Puglia in the locations named Padre Eterno and Botromagno.[45] Archaeological evidence and images found in these funerary contexts also included Apulo-Corinthian and conical metal helmets, a bronze belt, a leather corselet and a horse bit.[46] The military role of the deceased is also linked to athletic practices shown by metal strigils and to vessels for assemblies involving the intake of edibles and fermented beverages.[47]

At the end of the 5th century BC, thrusting spears, javelins and bronze belts were the most common military equipment in Peucetia, as is suggested by the findings at Bitonto, Monte Sannace, Gravina, Ruvo di Puglia, Ceglie and Conversano.[48] These findings also record that some other coeval Peucetian funerary assemblages include only a single thrusting spear and for this reason these burials were linked to combatants described as part of light-armed forces.[49] Finally, the images on the early red-figure Lucanian and Apulian vessels dated to the last decades of the 5th century BC also show the prestige of the horsemen through depictions of mythical figures linked to the equestrian practice, such as the Dioscuri,[50] and the representations of light-armed combatants equipped for the mounted combat.[51] Additionally, the tactical role of the infantry seems to be less prominent during this timeframe.[52] Moreover, the images on the red-figure vessels crafted in Magna Graecia show crowded scenes displaying several activities including mythical fights and hunting.[53] These also include figures represented with clothing and equipment linked to the Italic *ethnē* fighting mostly on foot alongside fighters characterised by attire and military gear associated with Hellenic culture.[54] These representations have been placed in connection with the warlike ideology of the deceased: the celebration of the military skills of the Peucetian aristocrats are seen as comparable to the heroic deeds of the heroes of the Hellenic mythology.[55]

Moreover, some craftsmen, including the figure part of the so-called 'Intermediate Group' as the Painter of BM F 162,[56] realised a wide variety of textile patterns and designs aiming to allow the identification of their owners as Italic fighters linked to some specific cultures settled in southern Italy (such as the Italic *ethnē* in Apulia and the Lucanians).[57] Alternatively, other artisans, such as the Dolon Painter,[58] elaborated earlier iconographical models by depicting compositional schemes such as squires on horseback holding the reins of a second mount and figures wearing clothing linked to the indigenous people of southern Italy.[59]

[37] Ciancio 2010b: 226; Montanaro 2015: 38.
[38] Roscino 2009: 490; Ciancio 2010b: 232-233.
[39] Ciancio 2010b: 236.
[40] Roscino 2009: 490.
[41] Roscino 2009: 491-492; Ciancio 2010b: 227-228; Montanaro 2015: 40-43.
[42] Montanaro 2015: 57.
[43] Montanaro 2015: 57.
[44] Montanaro 2015: 57; Montanaro 2018: 25-29.
[45] Ciancio 2010b: 232; Montanaro 2015: 60.
[46] Ciancio 2010b: 232-233; Montanaro 2015: 62-64.
[47] Roscino 2009: 492; Ciancio 2010b: 235; Montanaro 2015: 62-63.
[48] Ciancio 2010b: 235; Montanaro 2015: 56-68.
[49] Ciancio 2010b: 235-236.
[50] Montanaro 2018: 31.
[51] Roscino 2009: 494-496.
[52] Roscino 2009: 494-495.
[53] Montanaro 2018: 31-36.
[54] Roscino 2009: 496-497.
[55] Montanaro 2018: 31.
[56] *LCS*: 78-80; Todisco 2012: 16.
[57] Roscino 2009: 500-501.
[58] *LCS*: 97-104; Todisco 2012: 22-24.
[59] Roscino 2009: 501.

Between the end of the 5th and the 4th century BC the funerary artefacts from Conversano, Rutigliano, Bitonto and Muro Sannace show the presence of bronze belts, strigils, items linked to the intake of wine and food and vessels decorated with Dionysian scenes.[60] Lucanian and Apulian images on red-figure vessels dated between the end of the 5th and the beginning of the 4th century BC show representations conveying the ambition of a privileged immortal existence, gained through heroic deeds.[61] It is worth noting that some examples of military imagery exalt the pride of Peucetian aristocrats in their role as combatants, wherein both victors and vanquished are perceived as worthy of a privileged afterlife existence owing to their martial virtues.[62] Also, the images linked to the activity of the Lucanian artisans dated to the first two decades of the 4th century BC show crowded compositional schemes resulting from the elaboration of models part of the Hellenic heroic repertoire and the images conveying traits linked to the Italic cultures.[63]

Between the second half and the end of the 4th century BC the military equipment and the images part of funerary assemblages testify to the presence of a privileged class linked to different tactical roles, as it is shown by the grave goods found in the semichamber tomb known as 39/1929 from Ruvo di Puglia and by the funerary assemblage of the grave found in Via Pantaleo at Conversano.[64] The items found in the tomb from Ruvo di Puglia were related to a heavy infantryman due to the images showing figures fully equipped and in heroic nudity and the metal items including a short bronze armor, a belt and a shield device in the shape of a boar.[65] These grave goods were linked to the Lucanian and the Samnite cultures.[66] Conversely, the grave goods from the burial of Via Pantaleo were linked to a horseman since they included a sword with a curved blade, a short knife, a javelin, a bronze belt, two greaves, an anatomical cuirass and a Phrygian helmet.[67] It is worth mentioning that the military equipment from Via Pantaleo were seen as connected to the Tarentine workshops and to the cultural influence coming from the Hellenistic culture developed in Macedonia and Egypt.[68]

It is also interesting to notice that the funerary assemblages just mentioned show the existence of commercial and cultural networks that allowed the Peucetian aristocrats to select from a wide range of luxury goods, and to acquire the objects and the images that were perceived as more coherent with their military traditions and cultural background. Representations decorating pottery realised by craftsmen in Magna Graecia dated to the end of the 4th century BC show mythical episodes linked to characters connected to the underworld and figures mostly seen as successful against the realm of the dead.[69]

In sum, the Peucetian military mindset underwent a development between the 6th and the 4th century BC. The Peucetian military mindset displays several enduring characteristics such as the view of the combat as an activity linked to the heroic sphere and to privileged people, the presence of figures supporting the combatants, a military system including different types of armed forces, the receptivity to external military models and the links with social gatherings connected to food and wine consumption, enhancing both a sense of belonging to a specific community and a privileged group.

Furthermore, there appears to have been a larger number of members of the Peucetian elite in military activities from the Archaic period to the Hellenistic era. Additionally, evidence and images from Peucetia outline a heterogenous military context showing many coeval different warfare traditions and the presence of a wide commercial and cultural network. Besides, during the Classical and the Hellenistic period, the Peucetian aristocrats aimed to raise interest in athletics and collective assemblies focused on eating and drinking fermented liquid. Moreover, the images realised by Lucanian and Apulian craftsmen between the end of the 5th and the 4th century BC show a wide range of mythical themes that span from the Dionysian images to echo concepts overcoming the death, rebirth, transformation, purification and an eternal existence akin to that of the heroes in Hellenic mythology. Also, the images found in Peucetia from the 6th to the 4th century BC develop from symbolic images showing generic compositional schemes linked to a heroic mindset, then to depictions showing specific mythical episodes part of the Hellenic culture conveying probably an increased familiarity with the figural repertoire part of the Greek traditions.

The archaeological context: the tomb 2/1994 from Gravina-Botromagno

Despite the majority of the surviving red-figure vessels produced in southern Italy lacking a specific archaeological provenance,[70] the present proto-Lucanian red-figure *hydria* was found on 24 and 25 March 1994 in a grave known as tomb 2/1994, located in a geographical area of the inner Peucetia region, in

[60] Ciancio 2010b: 236; Montanaro 2018: 32.
[61] Montanaro 2018: 27.
[62] Montanaro 2018: 27.
[63] Roscino 2009: 502.
[64] Ciancio 2010b: 236-237; Montanaro 2018: 33.
[65] Montanaro 2018: 33.
[66] Montanaro 2018: 33.
[67] Ciancio 2010b: 236-237.
[68] Ciancio 2010b: 236; Montanaro 2018: 33
[69] Montanaro 2018: 34.
[70] Herring 2018: 10.

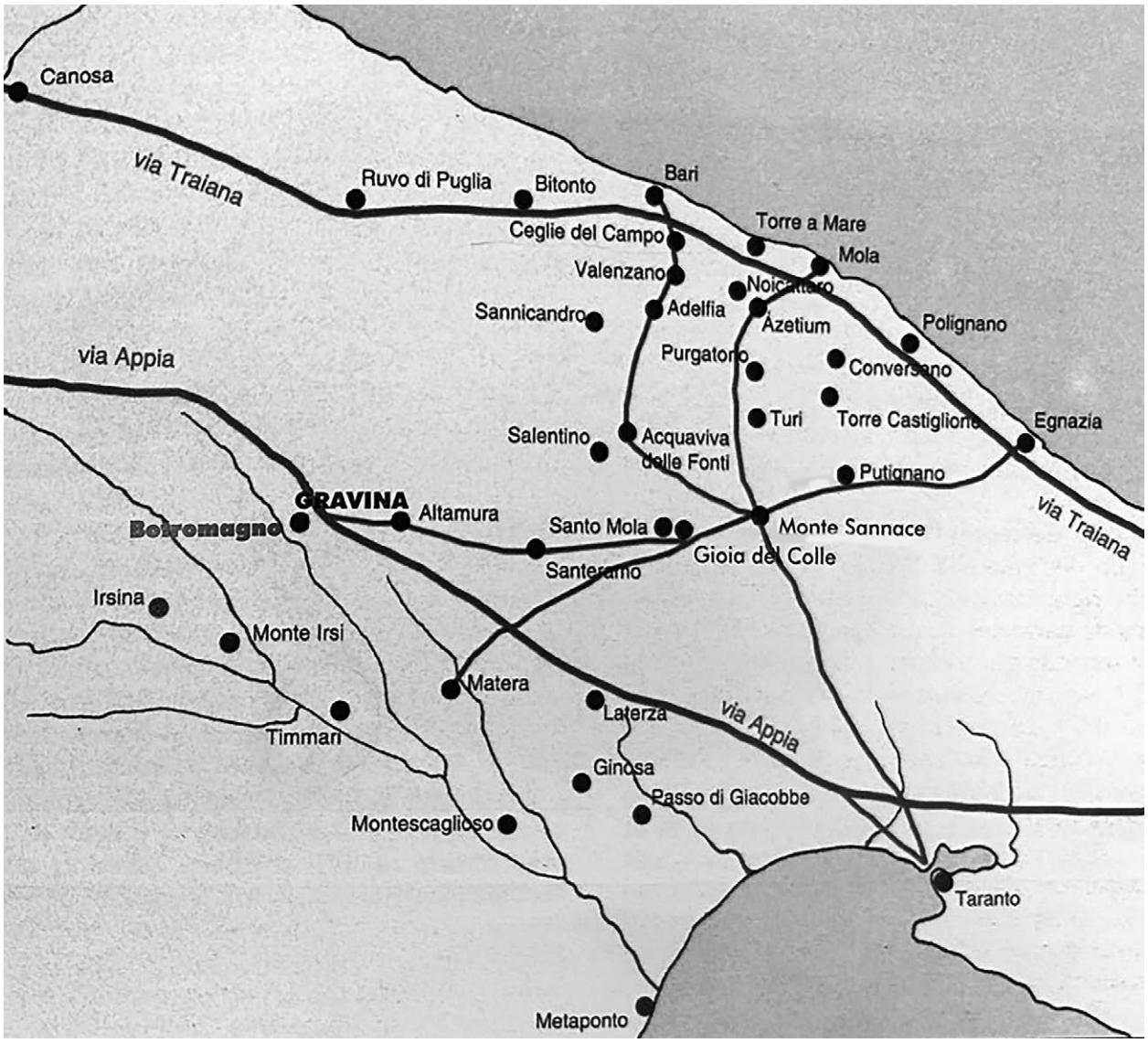

Figure 1: Map showing the location of the archaeological site of Botromagno and the urban settlement of Gravina di Puglia (author elaboration from Ciancio 1997: 117, fig. 146).

a location known as Botromagno, a few kilometres west of the contemporary settlement of Gravina di Puglia, situated 55 kilometres southwest from the city of Bari (Figure 1).[71]

Tomb 2/1994 was found in the sector labelled 'Site 14' (Figure 2).[72] 'Site 14' is a multilayered archaeological site that suffered the pillages and the damages caused by clandestine excavations until the superintendence set up some excavations in 1967 and from 1993 to 1994.[73] These activities brought about the discovery of several funerary structures built and used as burial sites between the 5th and the end of the 3rd century BC.[74] The latest structure found in the context was a large residential building from the 2nd century BC.[75]

Tomb 2/1994 is a semichamber tomb that was dug into a tuffaceous bench.[76] The grave is a rectangular underground structure bound by isodomic tuff blocks, paved by tuffaceous flagstones and roofed by nine rectangular tuff slabs (Figure 3).[77] The nine tuff slabs were placed on an upper series of tuff blocks, shown on their ten squared recesses on top, and a perimetral rim.[78] Two tuff slabs placed on the eastern part of the structure were damaged.[79]

[71] Ciancio 1997: 204-214; Ciancio 1996: 407-408.
[72] Ciancio 1997: 30-32.
[73] Ciancio 1997: 30-32.
[74] Ciancio 1997: 30-32
[75] Ciancio 1997: 30-32.
[76] Ciancio 1997: 74.
[77] Ciancio 1997: 74-75.
[78] Ciancio 1997: 74.
[79] Ciancio 1997: 74-75.

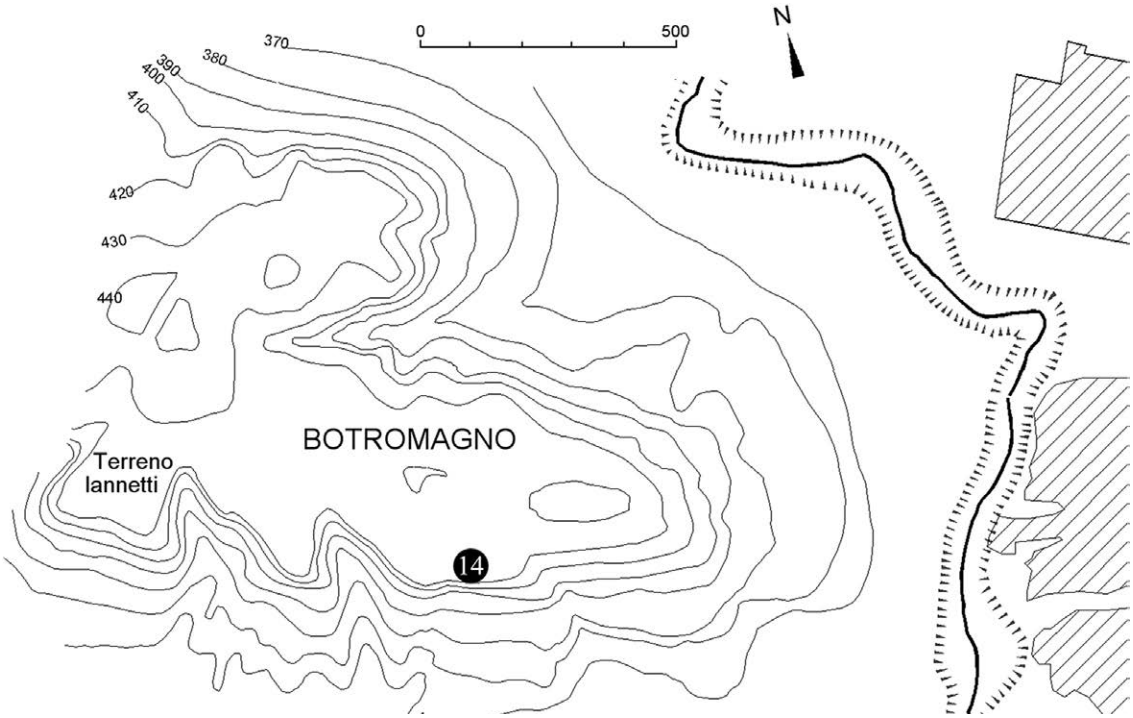

Figure 2: Map showing the location of site 14 in the archaeological area of Botromagno near the urban settlement of Gravina di Puglia (author elaboration from Schinco and Small 2019: fig. 2).

Scholars have argued that these damages are traces of a pillage that took place before the stratigraphical excavations of the grave.[80] The walls of the semichamber tomb were plastered and painted despite only fading fragments of these decorations being visible on the walls and the upper blocks of the grave.[81]

The surviving painted decoration of tomb 2/1994 allows us to observe, from the bottom to the top, a series of coloured bands: a lower red band about 50 cm high, two tight bands coloured in white and black, a large white band about 70 cm high, a red band of about 6 cm and two tight bands coloured in black and white.[82] Finally, the perimetral rim and the squared recesses were painted in red.[83] Ciancio suggested that the large central white band of tomb 2/1994 could have also been enriched by other painted images, as seen on the walls of another semichamber tomb found in site 4 in the Botromagno area.[84] This tomb is named 1/1974 and is dated between the second half and the end of the 5th century BC. It is embellished with the fragmentary remains of an articulated painted decoration, including geometric patterns, coloured bands of various sizes and pictures of animals.[85]

Figure 3: Tomb 2/1994 located in site 14 of Botromagno, during the excavation (photograph: after Ciancio 1997: 77, fig. 97).

[80] Ciancio 1997: 74-75.
[81] Ciancio 1997: 75.
[82] Ciancio 1997: 75; Montanaro 2015: 133.
[83] Ciancio 1997: 30/74-75; Montanaro 2015: 110-111.
[84] Ciancio 1997: 74-75.
[85] Ciancio 1997: 30, 69-72.

The accurate cleaning and the observation of the underground tomb allowed the identification of some traces interpreted as a single human body.[86] Due to its size, scholars argued that the deceased was an adult.[87] The human remains were placed on the eastern side of the tomb, oriented north-south.[88] Due to the ancient pillage of the graves of the necropolis of Gravina-Botromagno it is difficult to understand if the funerary structures were used for multiple burials.[89]

Thanks to the detailed analysis published by Ciancio, we can see the structure of tomb 2/1994 and the 23 grave goods found in this site during its excavation (Figure 3).[90] It is important to remember that our knowledge of the grave goods of tomb 2/1994 is only partial due to its looting, demonstrated by the damages to the tuff slabs that roofed the funerary structure.[91] Indeed, the funerary assemblage found in the western part of the grave must be seen as the surviving fragments of a larger group of objects.[92] The items placed in the tomb were not only located on the floor of the grave, since on the upper part of the southern walls of this funerary structure some iron nails were found still in the tuff.[93] Near these nails some spherical traces were observed on the upper tuff blocks of the structure: these circular details were interpreted by scholars as being linked to some grave goods once hanging from the iron nails.[94] Hence, items of the rich funerary assemblage of tomb 2/1994 were originally displayed in many different parts of the inner space of the grave, resulting in an extraordinary exhibition of precious objects. It is important to stress that the items found in tomb 2/1994 offer a limited opportunity to investigate only some of the goods and images part of the funerary assemblage originally placed in the grave.[95]

As it was pointed out by modern scholars, the grave goods placed in tomb 2/1994 from Gravina-Botromagno share some features with other funerary assemblages from the end of the 5th century BC found in Apulia.[96] These luxury goods should not be interpreted only as a simple ostentation of wealth and luxury.[97] In fact, these funerary assemblages were the result of an accurate selection that aimed to convey the high social status and the ideological mindset of the deceased.[98]

It is worth noting that the types and the decorations of these objects outline a cultural background based on ideologies and models shared and celebrated by the members of an indigenous elite, part of a social context linked to several artistic and material cultures.[99]

The large number of the objects were also related to the many roles played by the members of a privileged class in a wide range of aspects of their social lives, including social events, religion, ceremonies, military experiences, political activities and funerary rites.[100]

Therefore, it is now useful to outline an overview about the items and the images found in the grave 2/1994 from Gravina-Botromagno in order to have a better understanding of the deceased as a member of the Peucetian aristocracy between the end of the 5th and the beginning of the 4th century BC.

The grave goods from tomb 2/1994: an overview

The assemblage from tomb 2/1994 contain vessels similar to the objects that were part of the contemporaneous Peucetian burials, thereby corroborating the existence of a consistent material tradition prevalent among the Peucetian *ethnē* during the designated epoch. The funerary assemblage included red-figured and painted pottery, red-figured proto-Lucanian vessels, red-figured proto-Italiote vases, ceramics showing geometric and vegetal decorations (usually described as part of the local pottery class),[101] achromatic wares, black-glazed wares, two frame weights, a fragment of a chain, some nails and a fragmentary buckle.[102] The vast majority of the objects found in the grave is represented by pottery. It is possible to provide some observations about this class of material evidence. The many different types of pottery found in tomb 2/1994 included imported items produced by Greek artisans, vases realised in southern Italy by the first craftsmen linked to a new type of red-figured pottery class, wares produced by local workshops and vessels realised through other pottery techniques. Only some of the pottery items part of the grave goods from tomb 2/1994 have been attributed to specific artisans, such as the Attic Painter of the Naples Hydriskai,[103] a craftsman linked to the workshop of the

[86] Ciancio 1997: 77.
[87] Ciancio 1997: 77; 1998: 84.
[88] Ciancio 1997: 77. The absence of human remains does not allow one to make any hypothesis about the determination of the biological sex of the deceased and about the number of the bodies buried in the grave.
[89] Ciancio 2010b: 233.
[90] Ciancio 1996: 407-408; 1997: 101-112; Bartolo 1997: 204-215.
[91] Ciancio 1997: 74; 1998: 84.
[92] Ciancio 1997: 75. Ciancio argued that the luxury metal objects part of the grave goods of the tomb have been probably looted by robbers. Ciancio 2005: 48.
[93] Ciancio 1997: 75.
[94] Ciancio 1997: 75.
[95] Ciancio 1997: 75, 101; 1998: 84; 2005: 47.
[96] Montanaro 2018: 25.
[97] Montanaro 2018: 25.
[98] Ciancio 1997: 108; 2005: 47-48; 2010a: 388; Schierup 2014: 196; Montanaro 2018: 25, 29.
[99] Ciancio 1997: 108; 1998: 84; 2005: 47-48; 2010a: 388; Montanaro 2018: 25, 29.
[100] Ciancio 1997: 108; 1998: 84; 2005: 47-48; 2010a: 388; Schierup 2014: 196, 208; Montanaro 2018: 25, 29.
[101] Ciancio 1996: 407; Bartolo 1997: 101-102.
[102] Ciancio 1996: 407; 2010: 234; Bartolo 1997: 214-215; Montanaro 2015: 64-65; 2018: 25-26.
[103] Giudice 2007: 178.

proto-Lucanian Pisticci Painter,[104] the proto-Lucanian Cyclops Painter[105] and the proto-Lucanian artisans Amykos Painter,[106] whereas a large number of the vessels found in tomb 2/1994 are generically attributed to proto-Italiote workshops.[107] These wares demonstrate the articulated trade and cultural connections of the indigenous privileged classes of Peucetia during the second half of the 5th century BC.[108] After 440 BC the vessels realised by early Lucanian workshops started to become part of the funerary assemblages in central Apulia. For this reason, Attic, early-Lucanian and proto-Lucanian red-figured vases have been found in the same context.[109] As well, it is useful to mention that both Attic red-figure vases and early vessels produced in southern Italy are usually linked to events and activities including drink consumption.[110] Indeed, the shapes of the pottery found in the tomb 2/1994 were mostly related to liquids, including two *hydriai*, a bell-*kratēr*, a *chous*,[111] two *oinochoai*, a pitcher, two *kylikes*, three *kantharoi*, a cup, four *skyphoi*, two *lebētes* and two *gutti*.[112] These ceramic shapes may suggest that the vessels found in tomb 2/1994 from Gravina-Botromagno show an assemblage linked to different articulated sequences of material aims and to precise functions such as storing, dispensing, consuming and using several types of liquids such as wine, water, oils and other essences.[113]

It is difficult, however, to determine precisely the uses of these vessels: some of the wares might be used for elite social gatherings linked to the consumption of wine and food, other pottery can be linked to athletic, self-care or funerary practices,[114] the pottery assemblage may have been displayed as symbols during the funerary processions related to burials, the *protheses*,[115] the vases may be also used to convey the wealthy and the prestige of the deceased during funerary banquets, social events part of the burial traditions in Peucetia and, lastly, some of the items could be used to other rites, such as the ceremonial baths of the body of the deceased and then placed in the grave to demonstrate the execution of these rites.[116] The vessels could have been used for all the activities described or only for a selection of them. Moreover, it is possible to argue for the presence of groups of items probably used for different aims: as an example, the grave goods found in tomb 2/1994 included a red-figure Attic *kylix*,[117] a red-figure proto-Lucanian *lebēs*,[118] a black-glazed *kylix*[119] and a black-glazed *lebēs*.[120] Since these vessels are part of different ceramic classes, yet show the same shapes, it can be possible to argue that they had different uses for the Peucetian aristocrats. A definitive answer to these questions remains still elusive from a material perspective.

It is also noteworthy to observe that the figural decorations of the wares from tomb 2/1994 can be linked to two main iconographic motifs: depictions that can be interpreted as echoing human daily life and iconographies including mythical characters. The figural depictions on the wares from tomb 2/1994 show a selection of images part of the main iconographical themes linked to the early red-figure pottery produced in southern Italy:[121] meetings/conversations, scenes related to women, Dionysiac themes, athletics depictions, pursuit/rape scenes and warfare iconographies (Figures 4-11). Some vessels are decorated with symbolic designs and others with decorative patterns.[122] The shapes and the images on the vessels from tomb 2/1994 can be both related to male and female figures, which brought Montanaro to stress the challenge of establishing the biological sex of the deceased.[123]

Male and female figures are shown interacting in courtship/kidnapping/rape images, in 'palaestra

[104] Ciancio 1996: 407; Bartolo 1997: 207.
[105] Ciancio 1996: 407; Bartolo 1997: 208-209.
[106] Ciancio 1996: 407; 1997: 102-112; 1998; 2005: 47-48; Bartolo 1997: 204-206, 208; Depalo 2010: 396-399; Schierup 2014: 195, 199, 207, 214; Montanaro 2015: 64-66; 2018: 29-30.
[107] Ciancio 1996: 407; Bartolo 1997: 212-214.
[108] Montanaro 2018: 28.
[109] Schierup 2014: 200.
[110] Schierup 2014: 198.
[111] According to the information provided to me by the staff of Ettore Pomarici Santomasi Foundation's Museum, the red-figure proto-Lucanian *chous*, attributed to the Amykos Painter, from tomb 2/1994 located in site 14 of the archaeological area of Botromagno with the number of inventory 76092, has been robbed from the museum in 2011.
[112] Ciancio 1996: 407; Bartolo 1997: 204-214.
[113] Ciancio 1996: 407; 2005: 47-49; Bartolo 1997: 204-214. A similar pottery set was found in tomb 9/1976 located in Peucetia, near the settlement of Azetium in the necropolis at 'Contrada Purgatorio': Montanaro 2018: 27.
[114] Ciancio 1996: 407; Bartolo 1997: 204-213.
[115] Schierup 2014: 208.
[116] Schierup 2014: 196.
[117] Ciancio 1996: 407; Bartolo 1997: 212; Giudice 2007: 178. Red-figure Attic *kylix*, attributed to the Painter of the Naples Hydriskai, *c.* 450-425 BC, from the tomb 2/1994 of the necropolis of Gravina-Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76106, Gravina di Puglia.
[118] Ciancio 1996: 407; Bartolo 1997: 208-209. Red-figure proto-Lucanian *lebēs*, attributed to the Painter of the Cyclops, end of the 5th century BC, from the tomb 2/1994 of the necropolis of Gravina-Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76093, Gravina di Puglia.
[119] Ciancio 1996: 407; Bartolo 1997: 209-210. Black-glazed *kylix*, attributed to the Morel Series 4220, second half of the 5th-beginning of the 4th century BC, from the tomb 2/1994 of the necropolis of Gravina-Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76097, Gravina di Puglia.
[120] Ciancio 1996: 407; Bartolo 1997: 207-208. Black-glazed *lebēs*, near to Morel Series 4431, end of the 5th-beginning of the 4th century BC, from the tomb 2/1994 of the necropolis of Gravina-Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76091, Gravina di Puglia.
[121] Schierup 2014: 200, 206.
[122] Ciancio 1996: 407; Bartolo 1997: 206-214.
[123] Montanaro 2015: 64.

Figure 4: Red-figure proto-Lucanian *hydria* attributed to the Amykos Painter, *c.* 430-410 BC, from tomb 2/1994 of Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76084 (photographs: after Ciancio 1997: 108-109, figs. 138-139; 1998: 84, fig. 29.1).

Figure 5: Red-figure proto-Lucanian bell-*kratēr*, attributed to the Amykos Painter, *c.* 430-410 BC, from tomb 2/1994 of Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76083 (photographs: N. Lapacciana, courtesy of Ettore Pomarici Santomasi Foundation).

scenes',[124] in Dionysian iconographies,[125] in images including details linked to religious rites, athletics and funerary ceremonies, such as a small pillar[126] and in representations of people using furniture and including boxes, *taeniae* and fillets (Figures 4-8).[127] These textiles could be seen as luxury items holding considerable value and also associated with the lifestyle of elite woman and wealthy people.[128]

Male figures are depicted fighting in a large battle scene linked to mythical warfare,[129] interacting in

[124] Ciancio 1996: 407; Bartolo 1997: 204-205, 207-209, 213; Schierup 2014: 200.
[125] Ciancio 1996: 407; Bartolo 1997: 204-205, 208, 212-213.
[126] Roscino *et al.* 2012: 317.
[127] Ciancio 1996: 407; Bartolo 1997: 207; Giudice 2007: 178.
[128] Sofroniew 2011: 209; Roscino *et al.* 2012: 319-320.
[129] Ciancio 1996: 407; 1997: 102-112; 1998; 2005: 47-49; Bartolo 1997: 204-206, 208; Depalo 2010: 396-399; Schierup 2014: 195, 199, 207, 214; Montanaro 2015: 64-66; 2018: 29-30.

Figure 6: Red-figure proto-Italiote *skyphos*, unattributed, beginning of the 4th century BC, from tomb 2/1994 of Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76109 (photographs: N. Lapacciana, courtesy of Ettore Pomarici Santomasi Foundation).

Figure 7: Red-figure proto-Lucanian *hydria*, attributed to the workshop of the Pisticci Painter, end of the 5th century BC, from tomb 2/1994 of Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76090 (photograph: N. Lapacciana, courtesy of Ettore Pomarici Santomasi Foundation).

a Dionysian image[130] and acting in representations including athletic items such as picks, strigils and rods (Figures 4, 9-11).[131] Schierup argued that these images are echoing the status of a young male character who reached the physical maturity, ready to become part of the collective life of his community identified by the

[130] Ciancio 1996: 407; Bartolo 1997: 208.
[131] Ciancio 1996: 407; Bartolo 1997: 207-208, 213.

Figure 8: Red-figure Attic *kylix*, attributed to the Painter of the Naples Hydriska, 450-425 BC, from tomb 2/1994 of Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76106 (photograph: N. Lapacciana, courtesy of Ettore Pomarici Santomasi Foundation).

term 'polis'.[132] I partially agree with this view, but I am more inclined to identify the social group linked to the young male with the privileged class composed by the aristocratic indigenous families.[133] Also, the presence of wares and items traditionally associated with activities usually put in connection to female figures is relevant, such as a *kalathos* and two loom weights.[134] Moreover, female figures depicted on red-figure vessels are shown holding luxury items such as mirrors and wearing sophisticated outfits and hair accessories (Figures 4-8).[135]

Summarising the mentioned images could suggest that the vessels could be put in connection with the performance of daily activities, religious ceremonies, burial rituals, funerary rites and the devotional beliefs of a small group of aristocratic people. The overall atmosphere conveyed by these vessels and images may be seen as outlining a setting linked to the lifestyle of a group of people part of a social privileged class. These grave goods may be interpreted as an exaltation of the aristocratic life of the deceased by making a reference to

[132] Schierup 2014: 202.
[133] Ciancio 1996: 407; 1997: 102-112; 2005: 47-49; Montanaro 2015: 37-81; 2018.
[134] Ciancio 1996: 407; Bartolo 1997: 206-207, 214-215; Roscino *et al.* 2012: 319-320.
[135] Ciancio 1996: 407; Bartolo 1997: 204-207, 212; Giudice 2007: 178.

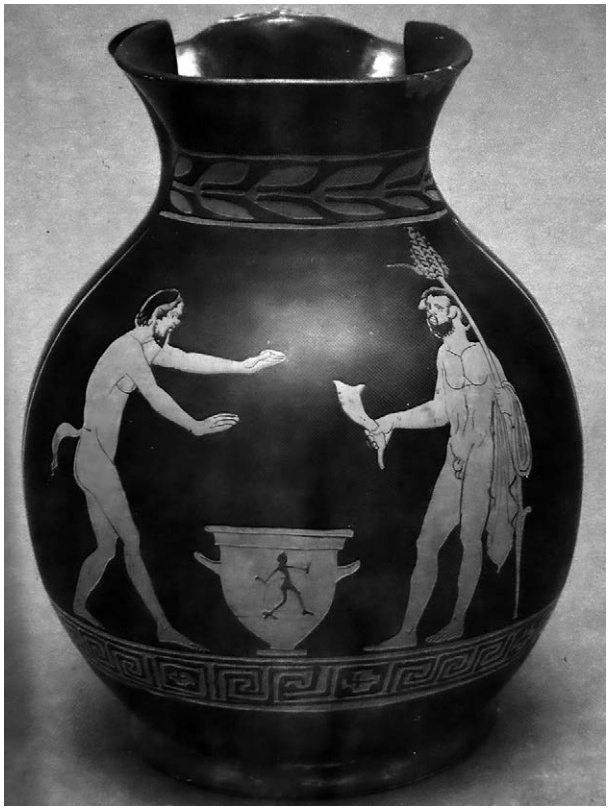

Figure 9: Red-figure proto-Lucanian *chous*, attributed to the Amykos Painter, *c.* 430-410 BC, from tomb 2/1994 of Botromagno, once Ettore Pomarici Santomasi Foundation's Museum inv. no. 76092, Gravina di Puglia, stolen in 2011, current location unknown (photograph: after Ciancio 1997: 107, fig. 137).

his family ties and implying activities that demonstrate wealth, prestige and pride. Thus, these vessels and their images can be also interpreted as evidence of a wide range of aspects of the earthly life of the deceased and to their social connections.

A network of images: echoes of a privileged lifestyle near the myths

The close examination of the images depicted on the red-figured vessels found in the tomb 2/1994 can provide some hints to the messages echoed by these surviving depictions which can be described as words, phrases and quotes of a much longer fragmentary figural speech. Firstly, one of the vessels may offer a hint about the fact that the human world and the mythical universe were perceived as very near to each other. This can be suggested by the figural decoration of the red-figure bell-*kratēr* attributed to the Amykos Painter showing, on one side, two women, probably two nymphs, at their toilet before a *loutērion*, and three satyrs.[136] On the other side there is the image of a meeting among a draped woman holding a strigil and two draped young males.[137]

It is also useful to stress that some vessels show images of human figures and mythical characters performing similar activities: this can be seen owing to the depiction of court/rape/kidnapping scenes depicted on the lower register of the *hydria* and on a proto-Italiote red-figure *skyphos*:[138] on the *hydria* the event is represented as happening among female and male people,[139] while on the *skyphos* the episode is shown on both the side of the vessel as taking place between a woman, most likely a maenad, and a satyr (Figures 4, 6).[140] Thus, these images may convey the idea that the mortal contexts and divine realms were characterised by similar activities, events and episodes.

Hence, these objects and their decorations epitomised the aspiration of the Peucetian aristocrats to differentiate themselves from the other categories of people in their society by showing activities that were part of the life of the privileged indigenous classes and mythical episodes linked to vessels richly decorated with images echoing the repertoire of images evoking the consumption of expensive beverages.[141] Indeed, the depictions on the vessels convey a context where people perform activities linked to a high-status lifestyle and also part of the existence of mythical characters. Consequently, these images may suggest a link between the human life and the supernatural sphere, outlining a context echoing the time when heroic characters lived and acted in a world where mythical figures were part of the context.

This interpretation is coherent with the hypothesis that the aristocrats assimilated themselves with the heroic figures of Hellenic mythology in order to proclaim their right to an afterlife like the mythical heroes.[142] This hypothesis seems also to be conveyed by another image found in the tomb 2/1994: the large battle scene on the red-figure *hydria* attributed to the Amykos Painter showing a sequence of military examples of

[136] Schierup 2015: 207.
[137] Ciancio 1996: 407; 1997: 102-108; Bartolo 1997: 204-205. Red-figure proto-Lucanian bell-*kratēr*, attributed to the Painter of Amykos, ca. 420-400 BC, from the tomb 2/1994 of the necropolis of Gravina-Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv.76083, Gravina di Puglia.
[138] Red-figure proto-Lucanian *skyphos*, unattributed, beginning of the fourth century BC, from the tomb 2/1994 of the necropolis of Gravina-Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv.76109, Gravina di Puglia.
[139] Ciancio 1996: 407; Bartolo 1997: 205-206.
[140] Ciancio 1996: 407; Bartolo 1997: 212-214.
[141] Schierup 2014: 208; Montanaro 2015: 64-66; 2018: 25, 29.
[142] Ciancio 1997: 108; 1998: 84; 2005: 47-48; 2010a: 388; Montanaro 2018: 29.

Figure 10: Red-figure proto-Lucanian *lebēs*, attributed to the Painter of the Cyclops, end of the 5th century BC, from tomb 2/1994 of Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 7609 (photographs: N. Lapacciana, courtesy of Ettore Pomarici Santomasi Foundation).

Figure 11: Red-figure proto-Italiote *skyphos*, unattributed, end of the 5th-first quarter of the 4th century BC, from tomb 2/1994 of Botromagno, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76111 (photographs: N. Lapacciana, courtesy of Ettore Pomarici Santomasi Foundation).

excellence and virtues ennobled by the overall figural echo recalling episodes of a mythical conflict.[143]

Thus, the decorations of the graves and the grave goods of the tomb 2/1994 from Gravina-Botromagno may be linked to the attempt to exalt the deeds of the deceased as an expression of an aristocratic ideology[144] put in close association with the actions of the heroes of the myth.[145] For the aims of this study it is useful to remember that a large number of images embellishing the grave goods found in funerary contexts in the central part of the Apulia region can be specifically related to Homeric literature.[146] Findings in Peucetia, and especially in the central area of this region, were characterised by many luxury red-figure vessels attributed to the most significant proto-Italiote, proto-Lucanian and proto-Apulian artists and workshops.[147]

The archaeological findings from the graves found at the sites of Gravina-Botromagno are remarkable due to their high quality, their many functions,

[143] Ciancio 1996: 407; 1997: 102-112; 1998; 2005: 47-49; Bartolo 1997: 204-206, 208; Depalo 2010: 396-399; Schierup 2014: 195, 199, 207, 214; Montanaro 2015: 64-66; 2018: 29-30.
[144] Montanaro 2015: 64-66; 2018: 36.
[145] Montanaro 2018: 31.
[146] Montanaro 2018: 31.
[147] Montanaro 2018: 25.

differing significance and elaborate decorations.[148] More precisely, the grave goods found in the funerary contexts part of the necropoleis at Gravina-Botromagno appear to be material echoes of the many aspects of the nearby city of the living, including cultural heritage, ideologies, social hierarchy, material productions and trade networks.[149] Additionally, the structures and the objects from this site outline the cultural receptiveness of Peucetian communities to new material productions, such as red-figured vases, part of a new craft tradition.[150] As a matter of fact, the rich trade routes linking Peucetia with Lucania and the artisans connected with productive sites related to the settlement of Metapontum are also shown by red-figure vessels attributed to artisans and workshops whose activity is associated with the early phases of red-figure vase production in southern Italy.[151] The analysis of the cultural and the artistic processes, linked to the transmission, interpretation and elaboration of representation in contexts related to the indigenous people of Peucetia, can be enriched owing to a study of the decorative apparatuses of the proto-Italiote red-figure vessels found at Gravina-Botromagno.[152] To be more precise, the grave goods found in tomb 2/1994 from Botromagno allowed us to date the burial to the end of the 5th century BC.[153]

In sum, tomb 2/1994 of Gravina-Botromagno can be described as one of the graves showing monumental features and a funerary assemblage consisting of luxury objects embellished by images conveying many messages linked to the aristocratic ideology of the Peucetia region.[154] The images embellishing the red-figure vessels found in this funerary context convey ideological messages linked to the warlike ideology and the relevance of the religious practices linked to Dionysus.[155] Therefore, this grave can be described as one of the best examples of burials associated with Italic figures of exceptional rank.[156] This is also testified by some of the red-figure vessels found in tomb 2/1994 of Botromagno attributed to the Amykos Painter, representing an assemblage including the most valuable examples of aesthetical and stylistical items from the last quarter of the 5th century BC.[157]

A proto-Lucanian craftsman: the Amykos Painter

The Amykos Painter was one of the earliest painters in the first phase of the red-figure vases produced in the Greek technique in the region of Lucania, among the others being the Pisticci Painter and the Cyclops Painter.[158] The clay and the remarkable similarities in shape, composition, designs and patterns among all the vessels within the artisans linked to this early phase of red-figured wares realised in southern Italy suggest the presence of a closely connected artistic community.[159] Modern scholars defined these craftsmen as belonging to proto-Lucanian pottery production.[160] The craftsmen operated with a high degree of collaboration among each other but also show few autonomous depictions.[161] The activity of the Amykos Painter is dated between *c.* 430 and 410 BC.[162] Scholars argued that the artisan produced his vessels in the Metapontum region and in other geographical areas.[163] It is important, however, to remember that the precise locations of the Lucanian red-figure pottery production centers and the mobility of the artisans in southern Italy are topics still subject of debate by modern scholars.[164] It is also interesting to note that the artistic influence of the Amykos Painter can be noticed due to the decoration of vases found in Apulia, Sicily and Calabria.[165] Also, the vases linked to the Amykos Painter's workshop were found in southern Italy, Sicily, Etruria and also in Illyria.[166] Therefore we understand that the workshop of the Amykos Painter was part of a dynamic artistic group linked with a wide commercial network that expanded in the southwestern part of the Mediterranean.[167] Focusing on Apulia, the best examples of the products made by the Amykos Painter were found in the Peucetia region, near the settlements of Ruvo di Puglia, Rutigliano, Ceglie del Campo, Conversano, Monte Sannace, Altamura and Gravina di Puglia.[168] Finally, it is worth remembering that the vessels attributed to the Amykos Painter found at Gravina demonstrated the larger range of shapes in Central Apulia.[169]

The development of the depictions associated with the activity of the Amykos Painter was recently analysed in detail.[170] Scholars have suggested that this artisan firstly developed his artistry thanks to the models elaborated

148 Montanaro 2018: 29.
149 Montanaro 2015: 64-66; 2018: 29.
150 Montanaro 2018: 25.
151 Montanaro 2018: 29.
152 Montanaro 2018: 29.
153 Ciancio 1996: 407; 1997: 108; 1998; 2005: 48; 2010a: 388; Bartolo 1997: 205-206; Depalo 2010: 396-399; Montanaro 2015: 64-66; 2018: 29-30.
154 Schierup 2014: 208.
155 Ciancio 1997: 102-108; 2010a: 388; Montanaro 2018: 29.
156 Ciancio 1997: 102-11; 2005: 48; Montanaro 2018: 29.
157 Montanaro 2018: 29.
158 *LCS*: 29; Ciancio 1997: 102-108; Todisco 2012a: 4-6; Schierup 2014: 192; Montanaro 2018: 29.
159 Thorn and Glascock 2010: 791.
160 Ciancio 1996: 407; 1997: 104-108.
161 *LCS*: 8.
162 Ciancio 1996: 407; 1997: 102-112; Todisco 2012a: 4-6; Schierup 2014: 192.
163 Thorn and Glascock 2010: 791; Schierup 2014: 192.
164 Thorn and Glascock 2010: 777-778.
165 Schierup 2014: 192.
166 Ciancio 1997: 204-206; Denoyelle 2014: 117; Todisco 2012a: 4-6.
167 Schierup 2014: 194-196.
168 Montanaro 2015: 233; Schierup 2014: 192.
169 Schierup 2014: 200.
170 Denoyelle 2014: 116-129; Montanaro 2015: 233; Todisco 2012a: 4-6.

from the Attic imagery by the Pisticci Painter and his workshop.[171] Subsequently, the Amykos Painter was conceivably influenced by the Tarentine artistic culture and this led the artist to embellish vases of a large size that were decorated with crowded compositions.[172] Lastly, the influence of the models of the Amykos Painter can be seen due to the depictions linked to the production of the Big Head, Vaste and Arnò Painters and other craftsmen adorning vases produced in workshops that were located in the settlement of Metapontum, including the Dolon and Brooklyn-Budapest Painters.[173] In short, the Amykos Painter was able to develop his own specific figurative language characterised by a constant artistic evolution; the earlier images realised by the artist were elaborated from Attic models, while the later representations of the craftsman show the influence of the Tarentine artistic production.[174]

The vessels and the fragments showing images attributed to the Amykos Painter suggest that the favourite shapes of this artistic figure were the bell-*kratēr*[175] and the *hydria*.[176] Also, in comparison, the iconographies attributed to the Amykos Painter usually show images described as 'genre scenes' representing satyrs and maenads, young characters pursuing/kidnapping draped female figures, athletes and warriors.[177] Moreover, the images attributed to the workshop of the Amykos Painter also show the earliest depictions of Italic warriors, probably a subject requested and appreciated by the indigenous clients.[178] It is interesting to note that the funerary assemblages found in Peucetia and dated to the second half of the 5th century BC (the same chronology of the vases attributed to the Amykos Painter) show the change from the Hellenic aristocratic model linked to the military sphere to a mindset focused on social gatherings related to the consumption of wine and food, usually described as symposia or banquets.[179] Hence, it has been argued that images of warriors realised by the Amykos Painter aimed to convey a deliberate archaizing representation of indigenous aristocrats associated with traditional heroic customs.[180] The repertoire of images of the Amykos Painter also includes few images of less common mythological subjects or unusual narrative details.[181] Additionally, some depictions of the artisan are linked to iconographic models demonstrated by different artistic media, such as architectural sculptures.[182] The depictions attributed to this craftsman display a remarkable attention to detail and realism, especially in the way he depicted human bodies and facial expressions.[183] Also, even though red-figure pottery limits the shades of colour, the Amykos Painter managed to use shades and gradations to add depth and volume to his figures.[184] Moreover, the scenes painted by the Amykos Painter are well-composed, with an effective balance between the characters and the surrounding space.[185] The artisan demonstrates an intuitive understanding of how to guide the viewer's eye through the scene, creating cohesive and engaging visual narrations.[186] The imagery ascribed to the Amykos Painter typically features figures positioned on a singular register or, less frequently, depicted on multiple levels slightly staggered where they occasionally overlap.[187] Additionally, some red-figure vases attributed to the Amykos Painter show a decorative apparatus, including similar patterns and designs, giving the impression that the artist was able to set up an almost systematic outline, near to a distinctive and formulaic artistic model. I am referring to the vessels embellished by two figural registers spaced by a frieze consisting of a sequence of vegetal elements, usually described as palmettes and lotus flowers.[188] More in detail, Denoyelle saw the red-figure *hydriai* embellished with these schemes as connected to the activity of a single artistic character.[189] This type of decorative apparatus was elaborated from the Attic models edited by the Pisticci Painter and then additionally modified and adapted by the Amykos Painter.[190]

To summarise, the images attributed to the Amykos Painter led scholars to suggest that the artist can be described as an artistic figure with a solid knowledge of some iconographical models, skilled in the realisation of standard patterns but also experimenting with new expressive models and designs.[191] The vases linked to the activity of the Amykos Painter show images defining a multi-layered and articulated artistic repertoire. Also, the images of this artist were appreciated by a wide range of customers of different cultural backgrounds and sensibilities.[192] It is therefore difficult to establish whether the images of the Amykos Painter were made upon the requests of some aristocratic clients, or whether the customers selected the iconographies from the assemblages produced by the artisan. It is

171 Todisco 2012a: 4-6; Denoyelle 2014: 116-129; Montanaro 2015: 233.
172 Herring 2018: 8.
173 Denoyelle 2014: 117; Todisco 2012a: 4-6.
174 Denoyelle 2014: 117; Todisco 2012a: 4-6.
175 *LCS*: 29; Todisco 2012a: 4-5; Denoyelle 2014: 118; Schierup 2014: 200.
176 Schierup 2014: 198.
177 *LCS*: 30-31; Todisco 2012a: 4-5; Denoyelle 2014: 118.
178 Schierup 2014: 192.
179 Roscino 2009: 492.
180 Roscino 2009: 492.
181 *LCS*: 30-31; Todisco 2012a: 5.
182 *LCS*: 30-31; Todisco 2012a: 5.
183 *LCS*: 30-31; Denoyelle 2014: 119; Todisco 2012a: 5.
184 *LCS*: 30-31; Todisco 2012a: 5.
185 *LCS*: 30-31; Todisco 2012a: 4.
186 *LCS*: 30-31; Denoyelle 2014: 118; Todisco 2012a: 5.
187 *LCS*: 30-31; Todisco 2012a: 4.
188 Bartolo 1997: 206; Depalo 2010: 396; Denoyelle 2014: 118.
189 Denoyelle 2014: 118.
190 Denoyelle 2014: 118.
191 Todisco 2012a: 5.
192 Ciancio 1997: 204-206; Denoyelle 2014: 117; Todisco 2012a: 4-6.

possible to argue that the Amykos Painter made some experimental prototypes of vessels with different iconographical elaborations that met the taste and the appreciation of some members of the privileged classes settled within the Italian Peninsula, Sicily and Illyria.[193]

As an example, scholars argued that the three *hydriai* attributed to the Amykos Painter decorated with large battle scenes linked to mythical episodes that are part of the Hellenic culture (such as Homeric fights, Amazonomachies and Centauromachies), found in funerary contexts in Peucetia region at Gravina-Botromagno[194] and at Ruvo di Puglia,[195] may be linked to the preferences of elites that were part of the communities residing in central Apulia.[196] Moreover, it is useful to recall that these vessels show a limited repertoire of images.[197] The proto-Lucanian red-figure *hydria* from tomb 2/1994 is one of the *hydriai* attributed to the Amykos Painter since the vessel is richly decorated with decorative patterns and two-figured horizontal bands showing crowded compositions (Figure 4). For the aims of this analysis, it is worth noting to briefly outline a digression comparing the three proto-Lucanian *hydriai* mentioned above. Before providing a short overview of these three vessels is useful to provide few information on the two *hydrai* attributed to the Amykos Painter and found in funerary contexts at Ruvo di Puglia: the first vase was found in a tomb in Piazza Bovio (previously known as Largo di Porta Noja)[198] while the second vessel was found in a semichamber tomb located at Corso Cotugno (previously known as Via dei Cappuccini)[199] and these two vases are now located in the storerooms of the Museo Archeologico Nazionale di Napoli. The upper registers of these vessels show mythical episodes linked to the interactions of Hellenic heroes (Heracles, some heroes of the Iliadic saga and the Lapiths) with mythical figures and cultures perceived as external to the Hellenic world (the Centaurs, the Amazons and the Trojans) while the lower registers of these vases are decorated with representations including crowded sequences including Dionysian creatures, a winged eros, young males and women.[200]

By recalling the representations on the vases found in the tomb 2/1994 from Gravina-Botromagno, it is interesting to remind the depiction on the proto-Lucanian red-figure *lebēs* showing a young male figure holding a club (Figure 10),[201] who may echo the figure of Herakles, a heroic character linked to the concept of overcoming the limits of human nature and achieving immortality through heroic deeds.[202] Intriguingly, the figure holding a club is depicted alongside another figure holding a pick, while on the opposite side of the *lebēs*, one young male is portrayed holding other objects associated with athletic pursuits: a rod and a strigil.[203] Hence it may be argued that the young male figure holding a club is connected to athletic practices seen as linked to the performance of heroic deeds. It is almost superfluous to recall that the acts of valour on the battlefield shown on the upper register of the red-figure proto-Lucanian *hydria* from Gravina-Botromagno are a group of heroic acts (Figure 4).

Also, by making a comparison with the figural decoration of the two *hydriai* found at Ruvo di Puglia, it is possible to notice a reference to Herakles depicted as beardless, to mythical fights, to Dionysian images and to courtship/kidnapping/rape scenes. The last two themes mentioned can be then put in connection with the vessels showing representations including symbols linked to Dionysus that are mostly characterised by images of satyrs and maenads found in tomb 2/1994 (Figures 5-6, 9). These iconographies may symbolically evoke Dionysian gatherings such as the *kōmos*.[204]

Therefore, the images on the vessels found in tomb 2/1994 of Gravina-Botromagno just mentioned exhibit a referencing system that is similarly echoed by the depictions on the proto-Lucanian *hydriai* attributed to the Amykos Painter found at Ruvo di Puglia described above. Thus, these depictions potentially allude to the parallels and links between Herakles and Dionysus, as they are both associated with aspects of human nature, possess privileged status, engage in heroic exploits and ultimately achieve divine recognition.[205] This perspective seems to be also confirmed by the decoration of the body and the neck of a red-figure Apulian volute-*kratēr* attributed to the Painter of the Birth of Dionysus, dated between 410 and 390 BC and claimed to be found in a context of the settlement of Bari.[206] On one side the body of the Apulian vessel is decorated with a two-level image including the apotheosis of Herakles in the upper register and a

193 Silvestrelli 2014: 109.
194 About this vase, see n. 3 above.
195 About these two vessels, see n. 198 and 199 below.
196 Schierup 2014: 207, 214-216.
197 Denoyelle 2014: 118.
198 Red-figure proto-Lucanian hydria attributed to the Amykos Painter, *c.* 430-420 BC, from a tomb found in Piazza Bovio (previously Largo di Porta Noja) at Ruvo di Puglia, Museo Archeologico Nazionale di Napoli inv. no. 81949 (= Heyd.3241). *LCS* 36.137; Montanaro 2007: 615-616; Schierup 2014: n. 114 215;
199 Red-figure proto-Lucanian *hydria* attributed to the Amykos Painter, *c.* 430-420 BC, from a semichamber tomb located at Corso Cotugno (previously known as Via dei Cappuccini) at Ruvo di Puglia, Museo Archeologico Nazionale di Napoli (previously part of the private collection Ficco-Cervone 1838) inv. 81950 (= Heyd.3247). *LCS* 45.222; Montanaro 2007: 534-536; 2015: 232-233; Schierup 2014: n.117 216.
200 Schierup 2014: 207.
201 Ciancio 1996: 407; Bartolo 1997: 208-209.
202 Roscino *et al.* 2012: 209-210.
203 Ciancio 1996: 407; Bartolo 1997: 208-209.
204 Roscino *et al.* 2012: 305-309
205 Roscino *et al.* 2012: 209-210, 305-309.
206 Roscino *et al.* 2012: 209. Red-figure proto-Apulian volute-*kratēr*, attributed to the Painter of the Birth of Dionysus, c. 430-410 BC, from Bari, Royal Museums of Art and History of Bruxelles A 1018. *RVAp*: n. 9 35; Roscino 2009: 498-499; Todisco 2012a: 45; 2012c: 336, pl. 56.1-2.

Dionysian scene in the lower level while a Dionysian procession is represented on the neck of the vase, on the other side the vessel show on the body a large battle scene usually described as an Amazonomachy[207] and on the neck a ceremony/rite among young male characters holding military equipment and athletic objects,[208] a draped female figure and a column with a capital. As it is easy to notice, the figural themes represented on the two sides of the Apulian red-figure volute-*kratēr* from Bari overlap almost entirely with the images on the vessels found in the tomb 2/1994 from Botromagno including a large battle scene, crowded Dionysian representations, a ceremony/rite and objects linked to the athletic sphere (Figures 4-7, 9-11).

The image showing the apotheosis of Herakles and the Dionysian gathering on the vase from Bari is unusual and the representation of Herakles as a young male with a diadem showing a central vertical apex has been described as showing ephebic traits linked the rejuvenation of the mortal body after the passage through the fire of the funerary pyre.[209] Moreover, the large battle scene show fighters wearing clothing linked to the Hellenic, the Italiote, the Italic and the cultures associated with Eastern and African contexts.[210] It is also interesting to notice that the male figure with the club on the red-figure proto-Lucanian *lebēs* from the tomb 2/1 Gravina-Botromagno is depicted in nudity and bareheaded maybe echoing an intermediate stage of the process linked to the gaining of a new status linked to the heroic ideology. On the red-figure Apulian volute-*kratēr* from Bari, Herakles is depicted with details conveying the message of an individual who reached a new condition. Hence, the images from Gravina-Botromagno and from Bari may suggest also an attempt to emphasise some different aspects of the existences of deceased linked to a similar ideology and to the shared models connected to the mindset of the Peucetian privileged classes.

This group of images may show different figural examples to convey the religious beliefs resulting from the complex and articulated interactions among the Hellenic models and the indigenous background and ideologies.[211] Thus, the representations on the vessels from tomb 2/1994 of Gravina-Botromagno may demonstrate an attempt to convey some models part of an ideology through images on several vases that are part of the same funerary assemblage, the *hydriai* from Ruvo probably show the attempts to realise a figural summary and finally the large vessel from Bari testify a further development of the narrative language.[212]

Hence, the proto-Lucanian red-figure *hydria* attributed to the Amykos Painter found in the tomb 2/1994 from Gravina-Botromagno can be linked to the changes of a complex artistic language.

For the aims of this analysis, I will mostly focus on the figural decoration of this vessel consisting of two registers: the upper band shows a large battle scene depicted on the shoulder of this vessel, while the lower section is embellished with a scene of five youths wearing drapes and equipped with spears and shields pursuing six draped women wearing diadems.[213]

The figural scenes on the proto-Lucanian *hydria*: an iconographic knot

An intriguing aspect worth noting pertains to the iconographical ambiguity present within the two crowded scenes decorating the *hydria* from tomb 2/1994 at Gravina-Botromagno. Establishing a clear and definitive chronological narrative sequence linking the two registers referenced poses a significant challenge. This inherent vagueness might suggest that the depictions were tailored for customers within a specific cultural milieu, enabling them to discern and comprehend the precise interconnections between the two registers. Alternatively, another plausible hypothesis may be that the figural embellishment adorning the vessel was specifically crafted to pose an interpretative challenge for the observers, encouraging them to engage in a careful observation of the decorative apparatus of the vessel, in order to reflect upon the numerous potential connections between the two episodes. One could also suggest that the two registers refer to different mythical episodes; the two representations were depicted on the same vessel due to their relevance to the same narrative tradition and to the same cultural background. This can be suggested by the two registers part of the decoration of the proto-Lucanian red-figure *hydria* found in a semichamber tomb in Corso Cotugno at Ruvo di Puglia.[214] Indeed, the upper register of this vessel is embellished with a centauromachy while the lower register is decorated with a Dionysian scene including women, men and a winged eros.[215] The links between these two registers might include narrative references, symbolic connections and other associations. I argue that the *hydria* from Gravina-Botromagno and the *hydria* from

[207] *RVAp*: n. 9 35; Roscino 2009: 498-499; Todisco 2012a: 45.
[208] In *RVAp* n. 9 35 the image is described as 'libation to a warrior'. Here it is useful to note that this depiction on the neck of the vessel from Bari also shows a male figure holding an *aryballos* in his left hand. The *aryballos* is an oil flask often shown in athletic scenes realised by artisans in southern Italy. Roscino *et al.* 2012: 320-321.
[209] Roscino *et al.* 2012: 209.
[210] Roscino 2009: 498-499.
[211] Montanaro 2018: 27.
[212] Montanaro 2018: 25.
[213] Ciancio 1996: 407; 1997: 102-111; 1998; 2005: 48; 2010a: 388; Bartolo 1997: 205-206; Depalo 2010: 396-399; Montanaro 2015: 64-66; 2018: 29-30.
[214] Montanaro 2007: 534-536; 2015: 232-233; Schierup 2014: 207, 216. For more information about this vase, see above n. 198.
[215] Montanaro 2007: 534-536.

Ruvo di Puglia can be described as variations on a single narrative theme, including the wide range of mythical episodes from Hellenic culture including heroic figures, women and mythological creatures.

The large battle scene on the proto-Lucanian *hydria* in detail

The large battle scene depicted on the upper register of the proto-Lucanian red-figure vessel from tomb 2/1994 of Gravina-Botromagno consists of a crowded composition including ten human figures and a horse (Figure 12). In order to allow for better identification of the fighters, I will label every human character with a number following a counterclockwise sequence, from left to right (Figure 13).

The first warrior (1) is depicted in combat action, standing and facing left. He wears a short, sleeveless *chitōn*, a linear belt and conical cap/bonnet; with his right leg bent and his left leg straight; in the right hand, folded from the elbow, he holds a spear in a horizontal position; a round shield with an offset perimetral rim is attached with a strap on his left hand folded from the elbow. This one attacks another warrior (2) represented partially lying on the ground and facing left, wearing conical cap and a belt diagonally across the naked body; his left leg bent under him and his right leg slightly bent, extended to the left; his right hand raising behind the head holds a sword with a straight upper edge and a curved lower profile; a round shield with an offset perimetral rim is fixed on his left arm; the shield is embellished with a snake as a shield device. Behind this character is a third warrior (3) depicted bareheaded, standing, slightly moving left and facing right, his left leg slightly bent and the right leg straight; a linear weapon is vertically represented in the right hand and a round shield with an offset perimetral rim covering his left arm; the shield is embellished with a central circular section; the warrior wears a folded drape hanging from the crooks of his arms and fixed by a horizontal belt to the body. He opposes by stepping back from the fourth warrior (4) depicted with a conical hat, standing, slightly moving right and facing left; the left leg is straight and the right slightly bent; in his right hand, raised to head level, he carries a short sword depicted behind his head and a round shield with an offset perimetral rim in his left; this warrior wears also a folded drape hanging from his right shoulder and fixed by a horizontal belt to the body; the bottoms of the folds touch both feet above the knees. A fifth warrior facing right turns his back (5); he is depicted slightly curved holding the body of a comrade with his right arm and carrying a round shield with an offset perimetral rim on his left arm his right leg slightly bent; a folded drape is fixed on his right shoulder by a linear belt; the folds hang behind the body; the head

Figure 12: Details of the large battle scene depicted on the shoulder of the red-figure proto-Lucanian *hydria* attributed to the Amykos Painter, *c.* 430-410 BC, from tomb 2/1994, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76084 (photographs: N. Lapacciana, courtesy of Ettore Pomarici Santomasi Foundation).

is coved by a conical cap. He supports and protects a fallen comrade (6) who is depicted partially lying on the ground and facing left; the upper part of his body is in a vertical posture, his eyers are shown open and his legs slightly bent; he has neither military equipment nor clothing. It is however hard to establish if the person (6) is depicted as seriously injured, dead or shown as mortally wounded and exhaling his last breaths.[216] In

[216] Some details of the vital energy of the character are testified by the poses of his arms, hands and legs while the depiction of the body seems to evoke the image of a corpse. The representation of the eyes of the figure shown as open is further ambiguous, the dead could have been depicted with his eyes still open emphasizing his fate or the agony of the figure could have been conveyed by his last earthly glance.

Figure 13: Detail of the large battle scene depicted on the shoulder of the red-figure proto-Lucanian *hydria* attributed to the Amykos Painter, *c.* 430-410 BC, from tomb 2/1994, Ettore Pomarici Santomasi Foundation's Museum inv. no. 76084 (photograph: after Ciancio 1997: 111-112, figs. 140-142).

front of this couple of characters (5, 6) is represented another, the first of which is a warrior in action (7). He is depicted standing, facing and slightly moving right; his left leg bent and his right leg straight; a short spear is horizontally represented in his right hand; a round shield with an offset perimetral rim is fixed on his left arm; he is wearing a short, sleeveless *chitōn* held at the waist by a belt, over which you can see a mantle fastened by a circular brooch; a conical cap completes the equipment. He attacks another warrior who has fallen to his knees in front of him (8). He is depicted partially lying on the ground and facing left; he is completely naked, wearing only a conical cap on his head; the right hand holding a short sword stretches backwards to lean against the ground; the sheath of the sword is depicted as consisting of an upper rectangular locket, a girdle and lower circular element, and hanging from a belt attached diagonally across the body; with his left hand he raises a round shield with an offset perimetral rim to defend himself against the attack of the warrior in front of him; the right leg bends under him and the left extends in the direction of the previous warrior. Towards him, from behind, comes another warrior (9) sitting with both his legs parallel on the left side of the galloping horse, facing left. The rider is dressed in a short *chitōn* held at the waist by a belt and wears a conical cap (helmet) on his head; he holds the horse harnesses and bridles with his right hand, a round shield with an offset perimetral rim and two long spires with his left. Behind the rider, another pedestrian warrior (10) is depicted standing, slightly moving right and facing left; he is young, bareheaded and wears a drape hanging from the crooks of his arms; the garment is fastened at the waist with a belt; this warrior holds a long spear vertically in his right hand and has a round shield with an offset perimetral rim fixed on his left arm; the shield is embellished with a black club; his left leg straight and his right leg slightly bent.

As a general observation we can say that all combatants are depicted barefoot. The only background details are two rock-like elements under the left leg of warrior (2) and under the chest of character (6).

Images and texts: symbols in different media

As I have noted, the proto-Lucanian red-figure *hydria* is mentioned in a large number of academic contributions.[217] Ciancio provided the first interpretation of the large battle scene, claiming that the upper register of the *hydria* shows some Homeric episodes linked to the fights described in the *Iliad*.[218] The scholar also stressed that some of the characters depicted on the vessel would be easily recognisable to the observers.[219] Following this perspective, the author identified some characters depicted on the *hydria* as specific heroes of myth. Ciancio argued that the figure (6) can be recognised as Patroclus, the warrior (5) as Ajax Telamonius and the fighter (7) as Menelaus.[220] Following this interpretation, the character (6) can be seen as the corpse of Patroclus since the death of the young heroes is accurately described in Book 16 of the *Iliad*.[221] Schierup interpreted the image as a battle scene linked to the death of Patroclus.[222] Conversely, Ciancio emphasises the close resemblance between the proto-Lucanian image and some literary descriptions of Ajax, Menelaus and the body of Patroclus in Book 17 of the *Iliad*.[223]

(...) ὣς περὶ Πατρόκλῳ βαῖνε ξανθὸς Μενέλαος.
πρόσθε δέ οἱ δόρυ τ᾽ ἔσχε καὶ ἀσπίδα πάντοὀ ἐίσην,
τὸν κτάμεναι μεμαὼς ὅς τις τοῦ ᾽γ ἀντίος ἔλθοι. [...]
Αἴας δ᾽ ἀμφὶ Μενοιτιάδῃ σάκος εὐρὺ καλύψας
ἑστήκει [...]
ὣς Αἴας περὶ Πατρόκλῳ ἥρωι βεβήκει.
Ἀτρεΐδης δ᾽ ἑτέρωθεν, ἀρηίφιλος Μενέλαος,
ἑστήκει, μέγα πένθος ἐνὶ στήθεσσιν ἀέξων.

(...) so over Patroclus stood
tawny-haired Menelaus, and before him he held his spear and his
shield that was well-balanced on every side, eager to slay any man
who came to seize the corpse. [...]
But Aias covered the son of Menoetius round about with his
broad shield, and stood [...]
so did Aias stand over the warrior Patroclus,
and close by him stood the son of Atreus, Menelaus, dear to Ares,
nursing great sorrow in his breast.[224]

Hence, the large battle scene on the proto-Lucanian *hydria* could be interpreted as a figured translation and adaptation of some episodes recorded in the Homeric text about the Trojan War. This interpretation is widely accepted by scholars.[225] It is useful to remember that representations linked to Homeric literature and the Trojan cycle embellish a large number of luxury goods found in the graves from the site of Gravina-Botromagno.[226] Unfortunately, a detailed review of this association between the Homeric text and the image depicted on the shoulder of the red-figure proto-Lucanian *hydria* will largely exceed the aims of the present analysis. For this reason, I would prefer only to stress that the first interpretation of the image on the shoulder of the *hydria* provided by Ciancio could be more precisely describing the large battle scene as showing some episodes of Homeric epic poems and dubiously suggesting the identification of some figures with some heroes mentioned in Homeric text.[227] Indeed, on the *hydria*, the warrior (7) is depicted fighting in a pose and with equipment similar to the literary description of Menelaus at the beginning of Book 17,[228] while the combatant (5) echoes the descriptive passage mentioning Ajax shielding the body of Patroclus and Menelaus grieving the death of his young comrade.[229] Additionally, it is worth noting a few other lines from Book 17 of the *Iliad*, describing the chaotic fight near the body of Patroclus:

(...) περὶ δ᾽ αὐτοῦ μῶλος ὀρώρει
ἄγριος: οὐδέ κ᾽ Ἄρης λαοσσόος οὐδέ κ᾽ Ἀθήνη
τόν γε ἰδοῦσ᾽ ὀνόσαιτ᾽, οὐδ᾽ εἰ μάλα μιν χόλος ἵκοι:
τοῖον Ζεὺς ἐπὶ Πατρόκλῳ ἀνδρῶν τε καὶ ἵππων
ἤματι τῷ ἐτάνυσσε κακὸν πόνον(...)

(...) and around him wild battle arose,
nor could even Ares, rouser of armies, nor Athene,
at sight of that strife have made light of it,
though their anger were exceeding great.
Such was the evil toil of men and horses that Zeus
on that day drew taut over Patroclus (...)[230]

Indeed, these few lines outline a narrative image similar to the atmosphere evoked by the large battle scene depicted on the proto-Lucanian *hydria* from tomb 2/1994. Additionally, it is possible also to mention

[217] Ciancio 1996: 407; 1997: 102-111; 1998; 2005: 48; 2010a: 388; Bartolo 1997: 205-206; Depalo 2010: 396-399; Schierup 2014: 195, 199, 207, 214; Montanaro 2015: 64-66; 2018: 29-30.
[218] Ciancio 1996: 407.
[219] Ciancio 1996: 407; 1997: 108.
[220] Ciancio 1996: 407.
[221] Hom. *Il.* 16.843-854.
[222] Schierup 2014: 207, 214.
[223] Ciancio 1997: 108.
[224] Hom. *Il.* 17.6-8, 132-133, 137-139.
[225] Ciancio 1996: 407; 1997: 102-111; 1998; 2005: 48; 2010a: 388; Bartolo 1997: 205-206; Depalo 2010: 396-399; Montanaro 2015: 64-66; 2018: 29-30.
[226] Montanaro 2018: 31.
[227] Ciancio 1996: 407.
[228] Hom. *Il.* 17.6-8.
[229] Hom. *Il.* 17.132-133, 137-139.
[230] Hom. *Il.* 17.397-401.

some other lines from Book 17 of the *Iliad* focused on the concept of the difficulty of precisely naming and identifying the combatants during the fight, both by the heroes and by the people who remembered the struggle over the body of Patroclus:

(...) Ὣς ἔφατ', οὐδ' ἀπίθησε βοὴν ἀγαθὸς Μενέλαος,
ἤυσεν δὲ διαπρύσιον Δαναοῖσι γεγωνώς·
'ὦ φίλοι Ἀργείων ἡγήτορες ἠδὲ μέδοντες,
οἵ τε παρ' Ἀτρεΐδῃς, Ἀγαμέμνονι καὶ Μενελάῳ,
δήμια πίνουσιν καὶ σημαίνουσιν ἕκαστος
λαοῖς· ἐκ δὲ Διὸς τιμὴ καὶ κῦδος ὀπηδεῖ.
ἀργαλέον δέ μοί ἐστι διασκοπιᾶσθαι ἕκαστον
ἡγεμόνων· τόσση γὰρ ἔρις πολέμοιο δέδηεν·
ἀλλά τις αὐτὸς ἴτω, νεμεσιζέσθω δ' ἐνὶ θυμῷ
Πάτροκλον Τρῳῆσι κυσὶν μέλπηθρα γενέσθαι.'
Ὣς ἔφατ', ὀξὺ δ' ἄκουσεν Ὀιλῆος ταχὺς Αἴας·
πρῶτος δ' ἀντίος ἦλθε θέων ἀνὰ δηιοτῆτα,
τὸν δὲ μετ' Ἰδομενεὺς καὶ ὀπάων Ἰδομενῆος,
Μηριόνης, ἀτάλαντος Ἐνυαλίῳ ἀνδρεϊφόντῃ.
τῶν δ' ἄλλων τίς κεν ἥσι φρεσὶν οὐνόματ' εἴπoι,
ὅσσοι δὴ μετόπισθε μάχην ἤγειραν Ἀχαιῶν;

(...) So he spoke, and Menelaus, good at the war cry, failed not to
obey, and he uttered a piercing shout, calling aloud to the
Danaans: 'Friends, leaders and rulers of the Argives, you who at
the table of the sons of Atreus, Agamemnon and Menelaus, drink
at the common cost and give commands each one to his men—you
on whom attend honor and glory from Zeus—hard is it for me to
discern each one of the chief men, for so great a strife of war
has blazed up. But let every man go out without being named, and be
indignant at heart that Patroclus should become the sport of the
dogs of Troy.'
So he spoke, and swift Aias, son of Oïleus, heard him clearly,
and was first to come running to meet him through the battle,
and after him Idomeneus and Idomeneus' comrade, Meriones, the
peer of Enyalius slayer of men. But of the rest, what man from his
own mind could name the names of all who came after these and
roused the battle of the Achaeans?[231]

By putting together these Homeric lines mentioned above it is then possible to notice that the large battle scene on the *hydria* from tomb 2/1994 of Gravina-Botromagno conveys a similar atmosphere, allowing the interpretation of the viewer to wave among the identification of some specific heroic figures, the recognition of a selection of Homeric episodes and the undistinguished vagueness of the melee. Following this interpretation, the depiction of the character (6) can be described as taking inspiration from different episodes described in the *Iliad*. Consequently, the figure (6) can be interpreted as a depiction characterised with dramatic emphasis, evoking the ambiguities between life and death.

However, it is clear that the emphasis of the image is on the military deeds of the heroes, and this brought scholars to stress that the large battle scene aimed to celebrate many aspects of the warlike ideology of the members of the Peucetian elites. Previous studies emphasised that on the shoulder of the *hydria* from Gravina-Botromagno the representations revolve around the concepts of conflict, military deeds and death during a struggle.[232] The warrior who achieves a heroic death in battle is celebrated as a symbolic figure in society, since through the glory of having taken part in a conflict, the combatant became part of the collective memory as a model similar to the heroes of myth.[233] Additionally, some depictions emphasised the role of the single fighter and the ideals linked to military skills and excellence (1, 3, 4, 7, 8 and 9).[234] In order to better detect and understand the messages conveyed by the large battle scene it is useful to provide some observations of the narrative sequence depicted on the upper register of the red-figure proto-Lucanian *hydria* from tomb 2/1944 from Gravina-Botromagno.

Observations about the narrative of the fighting

The analysis of the narrative of the large battle scene on the *hydria* from tomb 2/1994 from Gravina-Botromagno can be prefaced by remembering Hölscher's observation on the depictions of large battle scenes produced during the Classical period.[235] The author claimed that these representations, whether centred around mythical narratives or real military events, fragmented the image into a series of individual combats.[236] Each figure was exclusively linked to their direct antagonist.[237] Nevertheless, the single duels or groups of fighters engaged in combat were not located realistically in relation to one another.[238] More precisely, depictions of monomachies or groups in the same

[231] Hom. *Il.* 17.246-251.

[232] Ciancio 1996: 407; 1997: 102-111; 1998; 2005: 48; 2010a: 388; Bartolo 1997: 205-206; Depalo 2010: 396-399; Montanaro 2015: 64-66; 2018: 29-30.
[233] Montanaro 2018: 29.
[234] Montanaro 2018: 29.
[235] Hölscher 2004: 23.
[236] Hölscher 2004: 23.
[237] Hölscher 2004: 23.
[238] Hölscher 2004: 23.

spatial context can be seen as a composition of warriors fighting in different directions and having opponents shown in front or behind them should not be seen as images aiming to represent a tactical picture.[239] Each fighter or group involved in combat was independently displayed; the spatial relationships between figures were intended to be 'realistic' only to the extent that they aligned with the direct actions of those figures.[240] This artistic convention aimed to convey the rapidity of human contact and to emphasise the concepts of individuality and actions, part of Greek culture during the Classical period.[241] This artistic perspective is close to Ciancio's description of the large battle scene on the *hydria* from tomb 2/1994 from Gravina-Botromagno as a sequence of heroic duels rather than a depiction of a fight between two armies.[242] Ciancio also stressed that the sequence of the fight is divided by the fighters (5 and 6).[243] It is interesting to stress the central position of these two warriors in the sequence of fights depicted on the shoulder of the vessel. However, by sticking to Hölscher's point of view, the battle scene can be divided into three monomachies (1-2, 3-4, 7-8), a combatant shielding a fallen comrade (5 and 6), a horseman dismounting from his horse to engage in close combat (9) and an infantryman moving on the battlefield (10). Therefore, the fight can be described as a confused melee of duels, combatants acting, moving and manoeuvring on the battlefield. This perception is also conveyed by the use of a wide range of offensive weapons including spear-like objects (9), thrusting spears (1, 7) javelins (3, 10) and short swords (2, 4 and 8). Moreover, by interpreting the depictions of the fighters not directly involved in a fight (5, 6, 9, 10) as a selection of pictorial images linked to the Hellenic heroic repertoire, the main subject of the image may be the individual value of the fighter. However, the right part of the image can be split into two halves including three warriors facing right (5, 6, 7) and three combatants facing left (8, 9, 10). Also, the fighters (5 and 9) can be linked to the concept of military support and combatants (7 and 9) are both characterised by unique details, such as the short mantle and the two spears. Thus it is possible to argue for the existence of a narrative linking the six fighters (5, 6, 7, 8, 9, 10).

Additionally, I would recall that the centauromachy embellishing the upper register of the proto-Lucanian red-figure *hydria* attributed to the Amykos Painter from Ruvo di Puglia shows nine Lapiths on foot fighting nine centaurs.[244] Therefore, it is possible to argue that the battle scene on the proto-Lucanian *hydria* from Gravina-Botromagno was inspired by a similar model showing two arrays characterised by the same number of forces. It is also worth recalling that the number of the figures on the shoulder is linked to the space available on the vessel: hence the figural composition may be seen as the result of a thoughtfully considered iconography, realised in order to outline a compositional harmony. Moreover, the modern interpretation of this large battle scene may also hint to an ambiguity in the image, since the echoes of a war part of the Hellenic mythical traditions are shown emphasising only the human perspective of the conflict. Lastly, it is possible to argue that the large battle scene on the *hydria* may also be interpreted as emphasising some aspects of the Peucetian military ideology by echoing the episodes of the *Iliad* that were the models for the heroic mindset, part of the indigenous aristocratic background during the first half of the 5th century BC in Peucetia region.[245]

Indeed, by recalling the Peucetian military models dated to the first half of the 5th century BC, it is interesting to notice that the fighter (9) is shown as dismounting from the horse, using the mount only to reach the battlefield and to fight on foot: a military practice linked to the military models of the Archaic age, as stated before.[246] Interestingly, the combatant (9) is shown as linked to only a single mount, probably echoing a development or a variant of a military equestrian practice perceived as part of another chronological period and rarely performed in battle. The warrior (9) can be described as a mounted infantryman due to his large shield with an offset rim for the fight on foot and the two weapons with a long shaft, most likely a thrusting spear and a javelin: this equipment can be both linked to the Archaic images showing heroic duels and to the funerary assemblages dated to the second half of the 5th century BC.[247] Also, the vast majority of the combatants depicted on the *hydria* are shown fighting on foot (1, 2, 3, 4, 5, 7 and 8), probably to enhance the tactical role of the infantry forces. Additionally, it is relevant to note that the two figures equipped with a thrusting spear (1 and 7) are shown as having a great advantage while attacking enemies equipped with swords partially lying on the ground (2, 8). Thus, the large battle could be possibly described as a figural synthesis including images echoing a selection of Peucetian military models coexisting and ennobled by a compositional scheme evoking the Homeric narratives.

The hats on the *hydria*: an unsolvable interpretative challenge

Before delving into the details of the textiles depicted on the upper register of the proto-Lucanian *hydria* from

[239] Hölscher 2004: 23.
[240] Hölscher 2004: 23.
[241] Hölscher 2004: 23.
[242] Ciancio 1997: 108; Montanaro 2015: 65.
[243] Ciancio 2010a: 397.
[244] Montanaro 2007: 534-536; 2015: 232-233; Schierup 2014: 207, 216. For more information about this vase, see above n. 192.
[245] Roscino 2009: 492.
[246] Roscino 2009: 491-492; Ciancio 2010b: 228.
[247] Roscino 2009: 491-492; Ciancio 2010b: 228, 235.

Figure 14: Funerary monument of a Greek warrior, 420-400 BC, from Megara, Pentelic marble, Worcester Art Museum inv. no. 1936.21 (museum purchase), Massachusetts, USA (photo courtesy of Worcester Art Museum, all rights reserved).

tomb 2/1994, I should refer to a challenging ambiguity represented by the seven conical hats worn by the fighters. These head protections are usually labelled as '*pileos* helmets'[248] but it is useful to remember that it is hard to establish their precise material. The different rendering of conical headwear part of the images attributed to the Amykos Painter has been linked to the attempt to convey the idea of head protections realised from different materials including fur, tanned leather or felt.[249] Also, a flexible conical headwear is sculpted on a funerary marble monument from Megara, now part of the collection of the Worcester Art Museum, dated between 420 and 410 BC (Figure 14).[250] It is important to remember that both the *hydria* and this funerary monument were made during the same chronological period.

Unfortunately, it is impossible to precisely determine the physical elements of the headwear of the fighters depicted on the proto-Lucanian vessel. Furthermore, the conical hats worn by the fighters are pieces of equipment of combatants depicted as fighting (1, 2, 4, 7, 8), acting (5) and moving (9). Conical hats are also worn by fighters represented as standing (1, 3, 4 and 7) and depicted in great difficulty (2 and 8). Therefore, it is difficult to detect a specific meaning behind the conical helmets depicted on the proto-Lucanian *hydria*. For these reasons, the conical headwear shown on the proto-Lucanian *hydria* will not be considered a narrative detail that is useful for this analysis.[251]

The depictions of textiles in the large battle scene: a new hypothesis

A detailed analysis of the textiles worn by the combatants depicted on the proto-Lucanian *hydria* from Gravina-Botromagno is still lacking. Indeed, scholars have used many different terms to identify the clothing and the drapes worn by the combatants on the upper register of the red-figure proto-Lucanian *hydria* from tomb 2/1994. Bartolo claimed that the combatants are depicted wearing short tunics and *chlamydes* knotted at the waist.[252] Depalo described the fighters (1, 2, 3, 4) as equipped with *chlamydes* and a *chitōn*.[253] Additionally, Roscino described a cloth part of the repertoire of the Amykos Painter as a short tunic fastened by a narrow ribbon belt and decorated by thin vertical parallel lines and a curved lower edge,[254] and this outline can be linked to the combatants (1 and 7).

Since the terms used by the craftsmen from the workshop of the Amykos Painter and the Peucetian elites to identify these garments are not currently known, I will use some conventional terms in order to avoid the risk of ambiguity. I will start my analysis with the short, sleeveless *chitōn* fastened by a thin linear belt worn by the combatants (1 and 7), and a similar cloth characterised by a larger belt and a lower rectangular border worn by the fighter (9). The next textile is the

[248] Bartolo 1997: 206.

[249] Roscino 2009: 486. Also, craftsmen operating in southern Italy realised images including conical headwear with patterns which can be linked to flexible materials and a selection of these representations can be found in Denoyelle 2020.

[250] Koortbojian 2023: 81-82.

[251] It is important to remember the significance of conical helmets and short tunics fastened by belts as ethnical identity markers linked to the costume of the Italic people as it is stressed in Roscino 2009: 486-489, 496.

[252] Bartolo 1997: 206.

[253] Depalo 2010: 398.

[254] Roscino 2009: 486.

horizontal heroic drape fastened by a thin linear belt hanging from the bends of the arms of the fighter (3) and lying between the legs of the fighters (3 and 4). Another cloth that can be observed is the vertical heroic drape covering the left shoulder, fastened by a thin linear belt to the waist and fitted to the back and the lower part of the body of the fighters (4 and 5). Finally, the last fabric is the unique short mantle fastened by a circular brooch under the neck of the fighter (7).

The textiles mentioned above allow us to link some combatants that show similar poses and gestures such as the fighters (1 and 7) and the warriors (3 and 10). By recalling the identification of some characters as specific heroes of the Trojan War, namely the combatants (5, 6 and 7) usually identified as Ajax Telamonius, Patroclus and Menelaus,[255] it is then possible to suggest that the 'Greeks' could be recognised as the combatants (1, 4, 5 and 7) and the 'Trojans' could be identified as the fighters (2, 3, 8, 9 and 10).

Intriguingly, the two arrays display precisely the same number of combatants acting in the field. Additionally, it is interesting to notice that both the 'Greeks' and the 'Trojans' are characterised by two distinct types of clothing that can convey the idea of military forces of different military units fighting together. The 'Greeks'' clothes include short, sleeveless *chitōnes* and vertical drapes (1, 7, 4 and 5) while the 'Trojans'' garments are a short, sleeveless *chitōn* with a lower rectangular border and horizontal heroic drapes (9, 3 and 10). Additionally, the short mantle of the fighter (7) may be a detail used to emphasise his role as a figure that is part of the upper positions of a hypothetical military hierarchy. The short mantle worn by the fighter (7) may even been a detail depicted to allow the identification of this combatant as a heroic military leader or as a chieftain. This hypothesis is strengthened by the cape represented as waving behind the body of this combatant; a unique dynamic feature that emphasises the attack pose of the combatant. One may also argue that the sleeveless short *chitōn* worn by the warrior (9) may be a hint of his military prominence. This notion can be supported by the observation of the specific pose and the distinctive military equipment of the combatant (7) enhancing his military skills, since this warrior is the only figure depicted dismounting from a horse and holding two spears or two javelins. Hence, it may be captivating to suggest that the details of the representations of the fighter (7) and the combatant (9) are features realised to characterise them as high-rank warriors who are part of the 'Greek' and 'Trojan' array. It is important to mention the image of the combatant (5) who is usually identified as the Greek hero Ajax. The warrior (5) is depicted as equipped with the same cloth and weapons of the character (4), hence the link between these two figures is subject to different interpretations. It may be said that the figure (5) is a sort of 'duplication' of the image of the same individual performing different activities on the battlefield, including heroic duels and military support in favour of a fallen comrade. It could be argued that the figures (4 and 5) are two distinct warriors with the same rank and part of the same armed force characterised by a specific military costume. Finally, it could be suggested that these two fighters are part of a military contingent composed of combatants showing the same military attire despite potential differences in their hierarchical positions. However, the vertical heroic drapes of the combatants (4 and 5) are shown as static, although the fighter (4) is depicted in a twisting dynamic pose, moving to attack his opponent (3).

It is useful to stress that the clothing and the drapes depicted on the *hydria* are shown mostly as static elements. Indeed, the dynamism of the textiles is mostly a background detail. It could almost be argued that rather than being depicted on the *hydria*, the clothing and the drapes are rigorously sculpted on the surface of the vessel to enhance the role of the combatants as eternised images of models of military virtues. Following what was previously elucidated, the textiles can also be seen as details that cross-reference the depictions of the combatants represented in different parts of the upper register of the vessel. This hypothesis highlights the assumption that the reading and the interpretation of the battle scene may have been a prerogative of few members of the Italic elite, with a specific culture that allowed them to appreciate, interpret and understand this complex and multifaceted artistic language enriched by details that can be appreciated by a skilled eye.

Moreover, the analysis of the textiles represented on the proto-Lucanian *hydria* from tomb 2/1994 from Gravina-Botromagno can suggest a new compositional reading of the large battle scene. The image can be described as divided into two main parts: the two monomachies on the left and the two groups of six combatants on the right. The two duels may convey the idea of a heroic combat while the two groups suggest the atmosphere of a chaotic melee emphasising the efforts of the fighters to cooperate and to act on the battlefield. This was also partially suggested by Ciancio while describing the warriors (9 and 10) as ready to engage in a fight.[256] This interpretation is strengthened by putting in comparison the depiction of the fighter (10) with the pose and the equipment of the combatant (3) who is represented as fighting in a close combat during a duel. Additionally, a feature of Homeric heroic

[255] Ciancio 1996: 407; 1997: 102-112; 1998; 2005: 388; Bartolo 1997: 204-206: 208; Depalo 2010: 396-399; Schierup 2014: 195, 199, 207, 214; Montanaro 2015: 64-66; 2018: 29-30.

[256] Ciancio 2010a: 398.

combats is the co-operation of the military leaders on the battlefield, as stressed by Van Wees.[257] This hypothesis is further strengthened by the depictions of the combatants (5 and 6), two images that hint at the importance of the body of the hero and the awareness of preventing the enemies from seizing it. Moreover, these values may also hint at the consciousness of the need to place the corpse of the heroic fighter in a specific context, to celebrate the proper funerary rites and to commemorate the memory of the combatants thanks to religious ceremonies. Hence, the image may outline a reference to the existence of a privileged class of people who shared the same models and values. Thus, the members of the Italic elites are depicted as acting to support one of their associates, not only during his life but probably also after his death. The celebration of the concept of a small community consisting of few élite characters can be seen to involve the living and the dead also through war and military events.

The image on the proto-Lucanian *hydria* from tomb 2/1994 may also refer to the role of some warriors as chieftains fighting as allies and enemies of other political and military leaders, who were part of an elite group of aristocratic warrior chiefs, military leaders and chieftains. From this perspective, the battle scene may also be seen as strongly linked to the memory of real warfare experiences that were part of the life of the members of the Peucetian elites. Hence, the large battle scene on the proto-Lucanian *hydria* from Gravina-Botromagno could be described as an allegorical depiction of a 'forgotten battle' part of the lost history of Peucetia. Another detail that can be detected is that the 'Greeks' and the 'Trojans' are depicted as heroic warriors sharing similar, although not identical, equipment and clothing. As it is testified by a proto-Lucanian red-figure *hydria* now part of the collections of the Museo Archeologico Nazionale di Napoli[258] and a proto-Lucanian red-figure *nestoris* now displayed at the British Museum,[259] on some vessels attributed to the Amykos Painter it is possible to see representations of people showing clothing linked to the cultures associated to Oriental and African contexts and to mythological people and *ethnē* such as the Amazons, the Lydians, the Lycians and the Thracians.[260] Therefore it could be possible to assume that the depictions of the 'Trojans' on the *hydria* from Gravina-Botromagno could have been a deliberate choice to convey the idea of a conflict involving heroic combatants and communities sharing similar ideologies, equipment and models.[261] Hence, the warfare reality and the mythical past on the proto-Lucanian *hydria* from Gravina-Botromagno can be described as blended into an iconic depiction linked to the Hellenic heroic culture and to the heterogeneous Peucetian military mindset. This hypothesis is coherent with the many aspects of the warlike ideology of the members of the Peucetian elites, which are conveyed by the large battle scene represented on the vessel.[262]

Conclusions

To conclude, the observations about the textiles worn by the combatants on the proto-Lucanian red-figure *hydria* from tomb 2/1994 from Gravina-Botromagno within the context of military representations yield several insights: firstly, the analysis of textiles allows for the differentiation and identification of various military groupings. Distinctive textile characteristics can be interpreted as one experimental artistic attempt to realise some figural markers, to aid the categorisation and recognition of different factions and units or groups. Furthermore, textiles play a crucial role in distinguishing fighters belonging to specific contingents fighting alongside each other. Moreover, the study of textiles can unveil insights into the internal hierarchy of some military groups. Specific textile choices within representations of combatants convey associations with military power, as exemplified by the short mantle of the combatant (7). Also, since the fighter (1) and the warrior (7) are depicted showing the same type of short *chitōn* and a similar pose and gesture, it is possible to argue that the cloth was depicted with the aim to emphasise the connection between these two combatants from a visual perspective. Hence the mantle of the fighter (7) may be a detail hinting to the military hierarchy of a military group/unit/contingent. Additionally, the mantle of the combatant (7) could even evoke the idea of military excellence and the concept of leadership, since no other warriors are shown wearing a similar cloth.

The depictions of fighters wearing short, sleeveless *chitōnes*, particularly those towering over adversaries still engaged in combat but depicted as partially lying on the ground (2 and 8), or those exhibited by combatants showcasing equestrian skills during battle (9), links these attires with notions of martial strength and prowess. Lastly, the characterisation of some combatants without clothes can also communicate some different messages; for instance, the absence of textiles on the depiction of the fighters (2 and 8) might

[257] Van Wees 1988: 7.

[258] *LCS*: 36, 137; Montanaro 2007: 614-615; Schierup 2014: 207, 216; Denoyelle 2014: 122.

[259] *LCS*: 44, 216; Todisco 2012c: 287, tab. 7.3. Red-figure proto-Lucanian n*estoris* attributed to the Amykos Painter, *c.* 430-420 BC, context of provenance unknown, British Museum, London, 1867,0508.1329 (F 177).

[260] *LCS*: 36, 137; 44, 216.

[261] It is pertinent to note that the representations crafted by Apulian and Lucanian artisans of later chronological periods developed an artistic language including patterned clothing, large studded belts, elaborated helmets and drapes as ethnical markers of the indigenous people. Roscino 2009: 494-497.

[262] Ciancio 1996: 407; 1997: 102-111; 1998; 2005: 48; 2010a: 388; Bartolo 1997: 205-206; Depalo 2010: 396-399; Montanaro 2015: 64-66; 2018: 29-30.

emphasise their struggle during combat, while the absence of clothing and equipment (6) could suggest a fallen fighter.

In conclusion, the examination of textiles within depictions of military contexts unveils multifaceted messages, ranging from identifying group affiliations and hierarchical structures to conveying other narrative and symbolic themes. The textiles depicted on the upper register of the proto-Lucanian red-figure *hydria* from tomb 2/1994 from Gravina-Botromagno can be described as polysemic details testifying to the artistic taste, the cultural background and the warfare ideologies of the members of the Peucetian elites during the end of the 5th century BC. The 'statuary' textiles on the vessel from Gravina-Botromagno are artistic details carefully chosen that still proclaim and exalt the pride of the anonymous Italic heroic aristocrats who reached a lasting immortality, owing to the luxury goods richly embellished by skilled and creative craftsmen operating in southern Italy.

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Abbreviations/editions

LCS = Trendall, A.D. 1967. *The Red-figured Vases of Lucania, Campania and Sicily*. Oxford: Oxford University Press.

RVAp = Trendall, A.D. and A. Cambitoglou 1978. *The Red-Figured Vases of Apulia*. Oxford: Clarendon Press.

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From *Milites* to *Augusti*: the Adoption of Military Clothing in Depictions of Roman Emperors During the 3rd Century AD

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Abstract: During the 3rd century AD, Roman emperors developed an enhanced military representation that was related to the particular context of the period and the role of troops in legitimising imperial power. Their public image changed to that of a militarised portrait, not only in their facial expressions and depictions in literary sources but also in their costumes. In this paper, we analyse the adoption of military clothing by third-century AD emperors, focusing on the reflection of this phenomenon in numismatics, sculpture, and written sources. We determine that from Caracalla onwards, *Augusti* incorporated the long-sleeved tunic, trousers, and *paludamentum-sagum* into their public costume to connect themselves to the troops, a process that is difficult to trace but which is clearly visible on some sculptures, especially during the Tetrarchy.

Keywords: emperor, military clothing, numismatics, public image, Rome, sculpture, third century AD

Introduction

As Hekster states, 'Roman rulers had to be successful in war, if not in reality, certainly in the public perception'.[1] This was one of the central points of imperial representation, disseminated through coins, paintings, sculptures and their presence in public events. Considering that war was an activity related not only to defence or conquering new territories, but also to politics – as the political crises of AD 68-69 and 238 demonstrate – Roman *principes* were supposed to be active military leaders.[2] More specifically, during the 3rd century AD, with all the tensions, difficulties and transformations that occurred, the relationship between the emperors and the army was crucial, not only because of their connection with war but also due to the emperor's need to be accepted by the troops as part of the legitimization process.[3] As Magdalena Anda states, 'only those who demonstrated an outstanding ability and aptitude to control the troops could acquire and retain the imperial power'.[4]

However, the legitimacy of emperors was shown not only in rescripts, sculptures, or coins, but also in their personal presence. This is the case for celebrations such as the triumph, *adventus* or *profectio*, the importance of which is present in all forms of evidence.[5] Given that 'the dress code of Rome was regularized: a person should have been recognizable in the public so that everyone is informed about its status',[6] the clothing of emperors was a decisive detail of their public appearance, and therefore of their public image and representation.[7] In addition, this affirmation becomes clearer when we read literary sources such as the *Historia Augusta*, in which its author used dress as a marker of the emperor's status and morality.[8]

The main objective of this paper is to examine the representation of Roman emperors during the 3rd century AD, focusing on their military clothing and especially on the adoption of the costume of common troops as the imperial image. To achieve this, the main images of emperors, from imperial coinage to sculpture, are analysed to establish whether they were depicted with the military clothing of soldiers or in a more traditional way. To build a more complete picture, we will also take into consideration the key written sources, such as the *Historia Augusta*, Cassius Dio, and Herodian. In this way, we will move towards a firmer understanding of the changes that occurred during the period between Septimius Severus and Diocletian and

[1] Hekster 2023: 109.
[2] Hekster 2007.
[3] De Blois 2019: 226.
[4] Magdalena Anda 2022: 249 ('sólo quienes demostrasen una sobresaliente capacidad y aptitud para controlar a las tropas podrían adquirir y retener el poder imperial').
[5] Şare Ağtürk 2018: 421; De Blois 2019: 2-4; Hekster 2023: 265-266.
[6] Benda-Weber 2013: 134.
[7] Hales 2005: 131.
[8] Harlow 2005: 152. Throughout this work the *Historia Augusta* is considered to analyse the clothing of Roman emperors, and some statements about this source should be pointed out. First, it is well known that this literary work was written by a single author during the late 4th century - early 5th century AD, as its dependence on Aurelius Victor or Ammianus Marcelinus has been demonstrated (Syme 1968; Barnes 1978: chapter IV, 32-78). Moreover, there are several problems with its historicity, since it is based on historical data from previous authors mixed with fantasy (Barnes 1978: 124-125; Birley 2006). This kind of aspects are not the main objective of this paper, but it is convenient to note that the historiography related to this source, such as Velaza (2017, 2022), Syme (1983), Chastagnol (1994: IX-XXXIV) or Barnes (1978) among others, has been taken into consideration. Furthermore, in the case of problematic passages, we will discuss the reasons for their inclusion in this study.

discover how the changes in emperorship affected the way they were presented.

Roman army and military clothing during the 3rd century AD

The period between Septimius Severus and Diocletian has been seen as a period of transformation, change, military tension and even crisis.[9] From AD 230, and even more from AD 250 onwards, the Empire suffered attacks on all fronts, especially from the Sassanids in the East and the Germanic tribes in the North. Epidemics returned after AD 250 and the Severan Dynasty was the last strong dynasty, so civil wars became a natural way to obtain power. Moreover, throughout the whole century, there was a constant debasement of imperial coinage, with the creation of radiate coinage.[10]

This context obviously produced changes in military equipment and clothing because of the adoption of new combat tactics and through contact with populations from outside the Empire.[11] However, it must be said that changes in military equipment began slightly earlier. As Bishop and Coulston noted, during the Antonine Dynasty there was, a 'real and rapid development in design, and especially decoration, as to warrant the term "revolution"' that applies to the equipment of troops.[12] In addition, some changes in clothing, such as the adoption of *sagum* by regular troops, closed boots or *calcei*, and the widespread use of trousers, occurred during the 'Antonine Revolution'.[13]

Even with this change, the development of military clothing during the 3rd century AD is unique, as has been pointed out by several scholars. From Septimius Severus onwards, the representations of soldiers included most of these characteristics: long-sleeved tunic, tight trousers, rectangular cloaks, boots, ring-shaped belt buckles, and sometimes weaponry, such as a long sword or spear (Figures 1-3). This is also corroborated by written sources, which indicate that during the first half of the 3rd century, trousers were normally worn among the troops.[14]

Figure 1: Stele of an early third-century AD soldier from Alexandria, Egypt (photograph: A.M. Felicisimo, © Wikimedia Commons).

Figure 2: Stele of a praetorian preserved in the *Museo Nazionale Romano* (photograph: public domain).

[9] Christol 2006: 249-254; Ando 2012: 1-2.
[10] De Blois 2006: 268-269.
[11] About the changes in combat tactics, see Menéndez Argüín 2011 (especially chapters V and VII). Regarding the contact with 'barbarians' and the adoption of equipment from outside the Empire: Feugère 2010: 122-125. About the changes of military equipment (e.g. oval shields, spears, or long swords): Stephenson 1999; Bishop and Coulston 2006: chapter 7.
[12] Bishop and Coulston 2006: 128.
[13] Gordón Zan 2017: 100.
[14] *Hist. Aug.* Alex. Sev. 40.5; James 1999: 19, 22; Bishop and Coulston 2006: 182-184; Coulston 2007; Speidel 2009: 246; James 2010: 58-63; Hoss 2011: 38-39; 2016: 115. Although the *Historia Augusta* was written more than a century after the reign of Severus Alexander and he was considered an *optimus princeps* by its author (Chastagnol 1994: XLI; CLIII-CLIV), the terminology used, and the characteristics presented in this passage for military clothing are completely applicable for the 3rd century.

Figure 3: Stele of *miles* from Apamea, Syria (photograph: Heidelberger Akademie der Wissenschaften/Epigraphische Datenbank Heidelberg: © M. Spannagel).

We can establish the beginning of this change in clothing, or at least the first stage of a change that was certainly evident in the eyes of the Senate, to the principate of Septimius Severus. When he entered Rome in AD 193, he was leading troops of the legions I *Adiutrix*, I *Italica*, II *Adiutrix*, II *Italica*, IIII *Flavia*, VII *Claudia*, VIII *Augusta*, X *Gemina*, XI *Claudia* and XIIII *Gemina*[15] that were criticised by Cassius Dio:

> But, as a matter of fact, it became only too apparent that he had incidentally ruined the youth of Italy, who turned to brigandage and gladiatorial fighting in place of their former service in the army, and in filling the city with a throng of motley soldiers most savage in appearance, most terrifying in speech, and most boorish in conversation.[16]

Although we cannot conclude that Dio was referring to clothing, we can demonstrate that the 'savage' appearance was something that extended, at least, to the troops stationed on the Rhine and the Danube. The characteristics of the Roman soldiers' clothing in the 3rd century AD were also present in other places across the empire. For example, there are several tombstones depicting soldiers in this way in Apamea (Syria),[17] Rome,[18] Pannonia,[19] and Nikopolis (Egypt),[20] among other places.[21] These include the northern and eastern provinces, but they depict the same kind of clothing on funerary monuments. In addition, this style of dress is also present in paintings such as those from Dura Europos.[22] Therefore, the 'savage' appearance was not exclusive to Germanic troops. However, there were some changes in the 'uniformity' – though we cannot call this kind of clothing a uniform[23] – depending on the location of troops, as can be seen on belt buckles from the Danube region that were quadrangular instead of ring-shaped.[24] But, overall, there was a sense of community among soldiers related to their identity,[25] and expressed through symbols such as the eagle of Jupiter, language, the image of the emperor and, of course, the clothes they wore.[26]

Not only did a gradual change occur in the clothing and equipment of the army, but also in the way the army was commanded. As a result of the increase in conflicts at the *limites*, the leadership of different legions was transferred from the senatorial class to the equestrian class. For example, Septimius Severus established that the three new legions that he recruited – I, II and III *Parthicae* – were directly commanded by experts from the equestrian ranks.[27] Later, Gallienus replaced senatorial generals with equestrian generals.[28] However, this was not the only change in the leadership of troops, as the

[15] Rodríguez González 2001: 40-43.

[16] Cass. Dio: 75[74].2.6, transl. E. Cary. We can consider this passage from Cassius Dio as an example of the impact of the army on society and take it as true because we know that the Bithynian author was mostly favourable to Severus throughout his work. In this way, Rubin (1980: 41-42) explains that Dio is only critical of Severus on aspects such as the severity he showed after his victory or his conduct during the civil wars, although he justified the seizure of power he carried out. Herodian, on the other hand, as Rubin (1980: 93) has also noticed, was less favourable to the African emperor and more critic of his actions.

[17] Balty 1988: 97-104; Speidel 2019: 87-89. E.g. *AE* 1991, 01572; *AE* 1992, 01686, *AE* 1993, 01574, *AE* 1993, 01575, *AE* 1993, 01582, *AE* 1993, 01587, *AE* 1993, 01588 and *AE* 2013, 01696 among others.

[18] E.g. *AE* 1990, 00752.

[19] Coulston 2007: 536. From Pannonia Inferior: *CIL* III, 15159. From Pannonia Superior: *AE* 1909, 00147; *AE* 1971, 00223; *CIL* III, 04045.

[20] E.g. *CIL* III, 6596, 6601, 6609 and 6611 among others, *apud* Waebens 2015: 71-72.

[21] Coulston 2004: 149. From Noricum: *CIL* III, 11700. From Heraclea, Thrace: *CIL* III, 14207,06. From Byzantium: *AE* 1976, 00641. Coulston also published a study about the military equipment depicted on third-century AD tombstones that includes examples of iconography, confronted to archaeological finds (Coulston 1987).

[22] James 2010: xxv.

[23] Coulston 2004: 143-148; Hoss 2016: 115.

[24] Bishop and Coulston 2006: 182-184; Hoss 2011: 37-38.

[25] MacMullen 1984; James 1999; Speidel 2019: 84.

[26] James 1999: 18.

[27] Rodríguez González 2001: 102; Menéndez Argüín 2003: 313-314.

[28] Potter 2014: 254; Magdalena Anda 2022: 279-283. Davenport has studied this aspect in depth, demonstrating that as a consequence of the creation of the protectorate, the military changes of the 3rd century and the loss of manpower of Gaul – consequence of the creation of the Gallic Empire –, something that was established as an emergency measure remained as a common practice: the replacement of legionary legates with the officers who emanated from the protectorate (Davenport, 2019: 533-551).

emperor was present in battle during the period. This characteristic was a constant facet of emperorship of the period because of two particular features of the 3rd century AD: on the one hand, a considerable number of *Augusti* arose from the army, and, on the other, given the problems that were affecting the Empire, a strong military emperor was seen as necessary. In Rubin's words:

> The reign of Septimius Severus was an era when the importance of the army as a necessary foundation for an imperial power was not only exposed again to the entire world, but was also intensively imprinted on the soldiers' own consciousness by the Emperor's constant need to court their support.[29]

For example, Caracalla is presented in written sources as a *commilito*,[30] which linked him to the community of soldiers because of his attitude:

> The barbarians were delighted and absolutely adored him. So did the soldiers, mostly because of the donatives he paid out to them, but also because he shared in all their duties as an ordinary soldier, being the first man there with his spade if a moat had to be dug or if a river had to be bridged or a deep ditch had to be filled in. Any manual or tiring physical labour he was the first to tackle. His table was laid inexpensively and there were occasions when he even used wooden utensils for eating and drinking. He used to eat whatever bread was available locally. He would grind enough corn for himself with his own hands and make a barley cake which, after baking on charcoal, he would eat. He did not indulge in any extravagance and only used what was the cheapest thing available to the poorest of his men. He claimed that he loved being called comrade instead of emperor by them. Most of the time he marched alongside them on foot, rarely riding in a carriage or on horseback, and carrying the same equipment as they did.[31]

This consideration of the emperors as *commilitones* became clearer and more common after Maximinus Thrax because of the militaristic conception of emperorship. For example, we are told by the *Historia Augusta* that Maximinus 'had that barbaric rashness which made him think that even the emperor always owed the help of his own hand'.[32] This aspect is also present *in situ*ations such as the death, years later, of Trajan Decius in the battle of Abritus[33] or the demise of Gallienus during the siege of Milan.[34]

The military image of emperors in the 3rd century AD

As a result of the closer relationship between soldiers and emperors, the way they were depicted changed from a more civilian or triumphal image – that is, with *toga* or *lorica musculata* and with short-sleeved tunic – to a more militaristic and realistic one.[35] This change was gradual, as will be shown. If we compare the depictions from the reign of Septimius Severus and those of the Tetrarchy, marking the beginning and the end of the century respectively, we can see clearly how they adopted throughout it the long-sleeved tunic, *sagum*, boots and trousers, taking the appearance of soldiers for their public image.[36] For example, it is clear that from the 2nd century AD onwards, emperors used trousers as a part of their daily costume, even in times of peace, and that this garment was part of the dress of the troops.[37] As De Blois stated, this was the result of the necessity of gaining the acceptance of the troops in order to exercise legitimate imperial power,[38] but it was also a way to convey further messages related to the *virtus* of emperors.[39]

This adoption can be studied in a variety of sources, including literary and numismatic evidence, as well as sculptures. Even so, as Harlow pointed out, different sources communicate different messages and use different kinds of languages, so we must exercise caution when analysing them.[40] For example, the *Historia Augusta* offers many descriptions of imperial clothing, since it was useful for its author to describe individual emperors as good if they wore simpler garments and bad if their clothes were richly decorated and extravagant.[41] Cassius Dio also gave much importance to costume, at least to its symbolism and the changes in style that related to the politics of the time.[42]

Chronologically, one of the first clear steps in this process occurred with Caracalla.[43] However, there is a brief precedent for his father, since we know that

[29] Rubin 1980: 196.
[30] Potter 2014: 142.
[31] Hdn. 4.7.4-6, transl. C.R. Whittaker.
[32] *Hist. Aug.* Max.: 12.3. Transl. D. Magie. This *vita* of the *Historia Augusta* should be considered carefully for the analysis since it has a clear intention to show Maximinus as a tyrant because of his 'barbarian' origins, especially the central part of the *vita* where his *crudelitas* stands out (Escribano Paño 1996: 213). Despite the problem of this part of the *Historia Augusta*, we have collected here one of the places where its capacity as a soldier stands out since the rest of literary sources are unanimous about it.
[33] Depeyrot 2004.
[34] *Hist. Aug.* Gall. 14.9; Zonar. 12.25 (601-602).
[35] Alföldi 1970: 161.
[36] James 1999: 21; Benda-Weber 2013: 147.
[37] Benda-Weber 2013: 138.
[38] De Blois 2019: 226.
[39] Noreña 2001: 77-82; Hekster 2023: 112.
[40] Harlow 2005: 143.
[41] Harlow 2005: 144; Benda-Weber 2013: 142.
[42] Freyburger-Galland 1993. The author focuses on the part of Dio's work dealing with the High Empire, but we can notice the same idea applied to the 3rd century AD, e.g.: Cass. Dio 75[74].1.3, 78[77].4.4, 79[78].3.1-3 or 79[78].31.3.
[43] Mann 2017: 55.

Figure 4: Military sculpture of Septimius Severus (photograph: the author).

Figure 5: Statuette of Caracalla with a captive from Egypt (photograph: © Courtesy National Museums Liverpool, World Museum).

during the first period of his reign, that is, during the civil wars, Septimius Severus depicted himself 'with a short haircut, typical for soldiers, and with military clothes' (Figure 4).[44]

But as soon as he held a safe political position, his appearance and public image changed, notoriously to develop a more dynastic message. Despite this, when his son, Caracalla, began his sole rule after AD 211, he modified the imperial image.[45] In most imperial portraits, he wore a *paludamentum*, which is the typical military cloak – in fact, it was morphologically identical to a *sagum* – and a short haircut proper to soldiers. This fact, linked to his distinctive facial expression, greatly influenced later imperial portraits during that century.[46] This is an aspect that must be highlighted because, during previous centuries, emperors showed themselves as generals, while during the 3rd century AD, they started to be depicted as soldiers.[47] In this regard, literary sources are clear when they accentuate the soldierly image of emperors, but this can also be seen in some material representations. On a statuette preserved in the World Museum of Liverpool (Figure 5), Caracalla is presented in military dress, grabbing a captive's hair while wielding a sword, but it is noticeable that he is wearing a long-sleeved tunic.[48] This detail brings the appearance of the emperor closer

[44] Mennen 2006: 255.
[45] Newby 2007: 224; Leitmeir 2013: 468.
[46] Hannestad 1988: 284; Mennen 2006: 258; Hekster 2011: 345; Leitmeir 2013: 468.
[47] This collegiality was not completely new with Caracalla, because, as Mann states (2017: 56), the image of the soldier-emperor, *commilito*, was instituted by Caesar and emphasised by Caligula, Claudius and even Hadrian or Commodus. However, Leitmeir (2013: 469) doubts the relationship between short hair and beard and the fashion of soldiers.
[48] Riccomini and Porciani (2014) suggested that the emperor depicted on this sculpture is Caracalla because of his beard and haircut. Despite this, other scholars as Hofmann and Taylor proposed that he is Hadrian, or even Septimius Severus, including Kiss, Maderna and Lichtenberger (after Riccomini and Porciani 2014: 505).

Figure 6: Portrait of Maximinus Thrax (photograph: M.-L. Nguyen, © Wikimedia Commons).

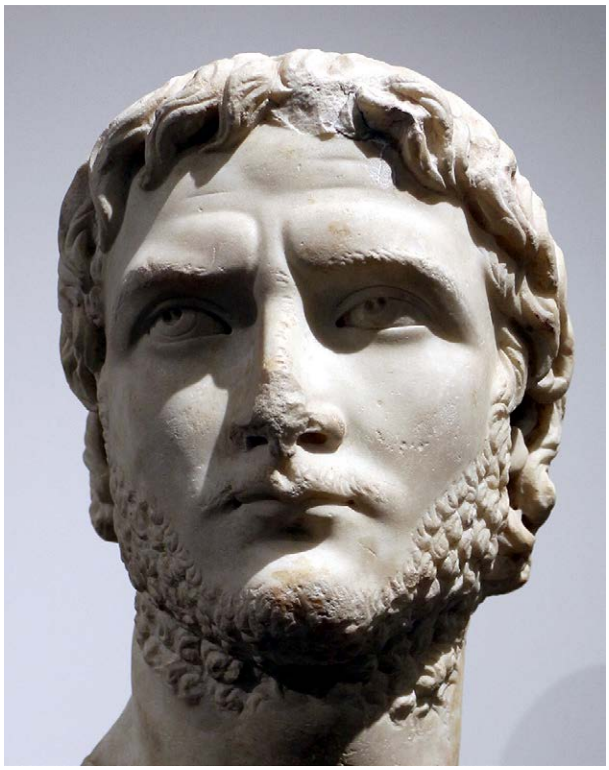

Figure 7: Portrait of Gallienus (photograph: Sailko, © Wikimedia Commons).

to that of the soldiers, thus including a crucial element of the image of soldiers in the depiction of the *princeps*.

After Caracalla and during the rest of the Severan dynasty, the portraits of the emperors harked back to earlier traditions, so Severus Alexander 'used one portrait type with slight modifications during a reign of nearly 13 years'.[49] However, no images of them have been preserved with the characteristics of the soldiers' dress. This fact is connected to the decrease in the number of imperial portraits in sculpture from the later Severan emperors onwards, which adds difficulty to our analysis of their clothing. Even so, it seems to be clear that the trend started by Caracalla regarding the representation of the emperor's facial expression remained in place throughout the rest of the century, as can be seen on sculptures of Maximinus Thrax (Figure 6) and Philippus Arabs, although there were exceptions such as those of Severus Alexander and Gordian III.[50]

Despite the changes in the *principes*' attitude – that is, towards a more militaristic style, depicted as fellow soldiers – it must be said that they were presented in a traditional or classical style, which finds parallels in private sculptures and depictions such as the Ludovisi Sarcophagus.[51] Later, during the reign of Gallienus, both his sole reign and together with Valerian, we observe a marked change. His portraits evolve from the more youthful ones linked to classical traditions, quite like those of Severus Alexander, to his adult image, where he was presented with the main characteristics of the portraits of late antiquity, that is, with wide eyes and quite abstract in form (Figure 7).[52]

After AD 268 and until the Tetrarchy, the portraits of the emperors followed the steps of Gallienus, but with an eye to the established characteristics of Caracalla. Probus is the best example of this development, because in his art, the classicism of Gallienus, the military image of Caracalla and the abstract art present in images of Valerian's son are mixed. Overall, his portraits prefigure the art of the Tetrarchy and the reign of Constantine.[53]

Moreover, we have some information from literary sources about this late third-century AD imperial portrait. Concerning Gallienus' clothing and his public appearance, the author of the *Historia Augusta* tells us that:

[49] Leitmeir 2013: 474. This is not only visible on sculpture, but also on coinage, where Severus Alexander is uniformly depicted during his entire reign, only with slight modifications because of his age. For example, if we compare bronze coins from AD 223 and AD 231-235 (e.g. *RIC* IV/2, nn. 403 and 652, respectively), his portrait remains almost unchanged, despite the almost ten-year difference between them.

[50] Hannestad 1988: 288; Kleiner 1992: 361-363.

[51] Hannestad 1988: 291.

[52] Hannestad 1988: 296-298; Kleiner 1992: 373-374.

[53] Kleiner 1992: 376.

> He went out in public adorned with the radiate crown, and at Rome where the emperors always appeared in the toga he appeared in a purple cloak with jewelled and golden clasps. He wore a man's tunic of purple and gold and provided with sleeves.[54]

In addition, the same source tells us that as emperor Tacitus wore the same togas and tunics he wore as a private citizen.[55] Later, he says that there were five depictions of this emperor at the *Villa dei Quintili*, one of which was military:

> His portrait was placed in the house of the Quintilii, representing him in five ways on a single panel, once in a toga, once in a military cloak, once in armour, once in a Greek mantle, and once in the garb of a hunter. Of this picture, indeed, a writer of epigrams made mock, saying: 'I do not recognise the old man in the armour, I do not recognise the man in the military cloak', and so forth, 'but I do recognise the man in the toga'.[56]

As can be seen, the notices about military clothing in sculpture and literary sources are quite scarce and tend to depart from the real clothing that the troops used, apart from the statuette of Caracalla preserved at the World Museum of Liverpool. However, between Gordian III and Philippus Arabs, we have an interesting source indicating that third-century AD emperors adopted military clothing for their public appearances. In Darabgird and Bishapur, in modern Iran, several rock reliefs commemorate the capture of Emperor Valerian in AD 260 and represent various emperors in military clothing.[57] Amongst these reliefs, one of the most striking elements that links the image of an emperor to military clothing is the belt, although it was not strictly an element of clothing but rather a piece of military equipment. The military belt was an identifying element of the military class and was worn exclusively by troops.[58] As Coulston has pointed out, one of the most important differences between soldiers and civilians was the type of belt they used. In the 3rd century AD, 'the waist-belt became broader, was characteristically fastened with a ring-buckle, and was generally not used for a dagger, whilst the baldric broadened and took elaborate *phalerae* and terminal-fittings'.[59] Considering that from the 2nd century onwards, and especially in the 3rd century AD it became a regular element of the emperors' clothing, it seems obvious that the *principes* adopted not only military dress, but also military identity.[60] Fortunately, we can observe this feature in the Bishapur relief (e.g. Figure 8).

In addition, other elements of military clothing are present in the representation of a wide variety of emperors in Bishapur. If we compare them to the funerary reliefs of soldiers, they seem to be the same. However, why is it important if they were made in Sassanian territory? First, James stated that the details of the emperors' clothing from the Bishapur reliefs may not be Sassanian but made by Roman provincial artists.[61] This would explain the particular accuracy of the representations and their parallels throughout the Empire. Additionally, given that the audience for whom these reliefs were intended was not Roman, it would not make sense for them to create scenes according to Roman ideals. Therefore, we see here a much more realistic image of the emperors, who are presented as Roman soldiers with clothes which they used in daily life. The same situation occurs on a cameo preserved in the Bibliothèque Nationale de France (Figure 9), where Valerian is clearly clothed with a long-sleeved tunic and *paludamentum*, although he is wearing mid-length trousers, boots and *lorica musculata* in a more classical fashion.[62]

However, sculptures and texts are not the only sources for the analysis of emperors' military clothing. Coinage was an extremely important medium for the dissemination of the imperial image. During the late 3rd century AD, cuirassed emperors were depicted on the obverse of coinage. This was not new, but it was uncommon.[63] It is related to the increasingly militaristic way that emperors were portrayed on coins, with the development of obverses that included not only the representation of cuirassed emperors, but also of *principes* equipped with shields, helmets or spears, as well as wearing *paludementum*.[64] All in all, in the words of Hebblewhite, 'many obverse types of the third-century crisis presented the emperor first and foremost as a warrior'.[65]

Even with the novelty of presenting the emperors in certain types of armour, their depictions are what we can identify as traditional, and there is not much difference between the military image of the early principate and that of the 3rd century AD (Figure 10).

[54] *Hist. Aug.* Gallieni Duo. 16.4, transl. D. Magie. Gallienus is considered a bad emperor by the *Historia Augusta*, which is reflected in the way he is presented. Thus, he appears connected to extravagances that include, among other aspects, the clothing mentioned in this passage. On this topic, see Chastagnol 1994: 798-801; Magdalena Anda 2022: 23-24.

[55] Harlow, 2005, 145. *Hist. Aug.* Tac. 10.1.

[56] *Hist. Aug.* Tac. 16.2-3, transl. D. Magie. The importance of this passage lies not in the description of clothing, but in the evidence that it provides on the distribution of images of the emperor in military attire among the civilian population.

[57] Macdermot 1954.

[58] Hoss 2011.

[59] Coulston 2004: 141.

[60] Alföldi 1970: 182.

[61] James 2010: 45.

[62] Felletti Maj 1958: 218.

[63] Mann 2017: 57.

[64] Grandvallet 2006: 133-134.

[65] Hebblewhite 2017: 39.

Figure 8: Bishapur relief depicting Gordian III, Philippus Arabs and Valerian (photograph: © Wikimedia Commons).

Figure 9: Detail of Valerian from the Bibliothèque Nationale cameo (photograph: Liviu Mihail Iancu).

However, there are exceptions; surprisingly, an interesting example of the emperors' use of military clothing is that of Elagabalus. His coinage has always been seen as a reflection of his religious concerns, through the development of a certain typology related to the cult of El-Gabal,[66] but by taking a deeper look we can attest that the clothing in which he is presented is not in fact religious but military. Certain coins show Elagabalus wearing a long-sleeved tunic, *paludamentum*, trousers and a ring-shaped belt buckle, and he is sometimes presented next to standards (Figure 10).[67] As previously mentioned, the ring-shaped belt buckle was part of the military equipment linked to the troops' identity, something that we can link to the necessity of the young *princeps* to ensure the loyalty of the troops that hailed him emperor in Emesa.[68]

Third-century coinage also shows the result of the emperors' adoption of military clothing. As attested on several types of coinage (e.g. Figure 11), the traditional way of showing military clothing on emperors was common in the first half of the century, but together with the more militaristic theme of obverses of the second half of the 3rd century, there were some changes in the emperors' depictions. Not only was there an increase in presenting the *principes* with armour and weapons (Figure 12), but during the later part of the

[66] Mattingly *et al.* 1938: 24.
[67] *RIC* IV/1, nn. 46-55; 131-135; 146-147; 177-179; 181.
[68] Alföldi 1970: 270; Dirven 2007: 29-31. About 'loyalty' and the proclamation by the troops: Hdn. 5.3.8-12; *Hist. Aug.* Opil. 9.4-6. However, some scholars, like Bérenger (2020), have pointed to the costume of Elagabalus as being feminine and oriental since their analysis is based on literary sources.

Figure 10: Reverse of *denarius* of Elagabalus (photograph: Staatliche Museen zu Berlin, Münzkabinett, n. 18257361).

Figure 11: Reverse of *aureus* of Severus Alexander (photograph: © Staatliche Museen zu Berlin, Münzkabinett, n. 18203836).

century, long-sleeved tunics started to appear on obverses, including those of Diocletian (Figure 13).

Finally, the result of this adoption is shown not only on coinage but also on sculpture. As illustrated in the famous porphyry groups from Venice, especially from the southern corner of San Marco and the Vatican library, all the military elements present during the 3rd century AD became characteristic elements of the depiction of the four rulers of the Tetrarchy.[69] Alföldi stated that the initiative of Caracalla to wear Germanic and Gallic clothes[70] could hardly have gone unnoticed, but is shown only in a later context during the Tetrarchy,[71] as depicted in the coinage and sculpture of this period. This result is also present in other representations such as the frescoes of the cult chamber of the temple at Luxor. These splendorous paintings, probably made by 'itinerant artisans directly associated with the imperial court or the army',[72]

[69] Hannestad 1988: 305; Walden 1990: 227; Kleiner 1992: 400-407; Rees 1993: 183.

[70] Cass. Dio. 79[78].3.3.

[71] Alföldi 1970: 180.

[72] McFadden 2015: 107. Regarding these figures and their clothing, McFadden (2015: 119) states that they were 'well-dressed dignitaries', but it is obvious that they were soldiers, probably officers, as occurs on the Dura Europos paintings (James 2010: 39). Moreover, if we compare their dress to the Great Hunt mosaic in *Piazza Armerina*, it becomes even more clear that soldiers and official ranking troops wore similar – if not even the same – clothing that is present on the paintings of the temple at Luxor.

Figure 12: Obverse of gold coin of Probus (photograph: © Staatliche Museen zu Berlin, Münzkabinett, n. 18206182).

Figure 13: Obverse of gold coin of Maximian (photograph: © The Trustees of the British Museum, n. 659516001).

present an *adventus* scene, where the soldiers are clothed in the same way as can be seen on late third-century coinage and in the aforementioned reliefs of the tetrarchs. Although the figures depicted in this scene are obviously not emperors, their appearance confirms that the adoption of military clothing at the end of the century became clearly evident and was presented on public monuments. This is also clearly visible in the spectacular marble reliefs from Nicomedia (İzmit, Turkey), where an *adventus* scene is presented.[73] Diocletian and Maximian are presented with 'long-sleeved tunics with gold bands at the shoulder and at the hem, (...) red trousers with horizontal gold bands (...) closed soft leather shoes in red (...) red belts (...) and elaborate fringed *paludamenta* with V-shaped folds'.[74] The depiction of both *Augusti* is almost the same as that of the emperors in the Bishapur reliefs some decades earlier and is similar to what we see on coinage.

The characteristics that we can relate to military clothing attested on imperial public images are definitively as old as the principate of Commodus, if we believe the *Historia Augusta*,[75] and are clearly noticeable from Caracalla onwards. This marks the chronological

[73] Şare Ağtürk 2018; Abbe and Şare Ağtürk 2019.

[74] Şare Ağtürk 2018: 418.

[75] *Hist. Aug.* Comm. 8.8.

beginning of the change in the emperors' clothing, as we have seen that the evolution from the short-sleeved tunic and *paenula* to long-sleeved tunic and *sagum* began in the 2nd century AD.[76] Different literary sources point in this direction and the trend is confirmed by reliefs including those from Bishapur. However, the adoption of military clothing was a process that can hardly be perceived in imperial portraiture, sculpture or coinage, but is clearly seen during the Tetrarchy. All in all, this was another step in securing legitimacy during the 3rd century AD, when, as noted above, the army emerged as a crucial segment of the populace for achieving and maintaining imperial power.

Conclusions

During the 3rd century AD, there was a change in imperial clothing that was strongly related to the army. This evolution was a consequence of the particular historical context of the century: the more militarised the context and the imperial house, the more militarised the clothing of emperors. Moreover, it was during this century that the clothing of soldiers changed noticeably, with soldiers presented on sculptures such as tombstones wearing the so-called 'camp dress'.[77] Soldiers are depicted without armour, wearing a long-sleeved tunic, *sagum*, trousers, boots and a ring-shaped belt buckle. This was the depiction that, step-by-step, constituted the image of third-century Roman emperors.

The origins of this depiction can be traced from Caracalla – if not earlier, from Commodus – onwards, but it was a gradual and logical process. Due to the emergence of soldier-emperors and their connection with military identity, we can observe through written sources and in the sculpture of the period that they started to wear long-sleeved tunics, ring-shaped belt buckles, trousers and *saga* or *paludamenta* to be identified with soldiers. This process is hardly traceable because there was a smaller number of imperial portraits of some emperors due to the short duration of their reigns, but the result of this adoption is clearly visible during the Tetrarchy.

Written sources such as the *Historia Augusta* inform us about the adoption of military clothing by emperors such as Caracalla, Severus Alexander and Tacitus, but the phenomenon is also visible on some sculptures, including those at Bishapur and Liverpool. In addition, the coinage of Elagabalus points in the same direction, presenting him with *a paludamentum*, long-sleeved tunic and ring-shaped belt buckle, standing near military standards while performing a sacrifice. Even unofficial objects of art, such as cameos or provincial statuettes, depicted emperors in military clothing just like soldiers, as can be seen on the *Bibliothèque Nationale* cameo of Valerian.

Because of this adoption, the image of emperors from Diocletian onwards is a clear reflection of the adaptation of the styling of *principes* during the century. Sculptures, such as those in porphyry from Venice or the painted ones from Nicomedia, clearly show how emperors adopted military clothing in their depictions.

Finally, the reason for this change in imperial portraits is related to the public perception that the *Augusti* desired to create, and, of course, with matters of legitimacy. Since gaining the support of the troops was essential for achieving and retaining imperial power during the 3rd century AD, it becomes evident that the emperors needed to display themselves in a more militaristic way, and even to act like *commilitones*, in order to secure the loyalty of the army and to keep a tight hold on the imperial power.

Abbreviations

AE = *L'Année épigraphique, Revue des publications épigraphiques relatives à l'Antiquité romaine*. París: Académie des Inscriptions et Belles Lettres.

CIL III = Mommsen, T. (ed.) 1873. *Corpus Inscriptionum Latinarum*. Vol. III *Inscriptiones Asiae, provinciarum Europae Graecarum, Illyrici Latinae*. Berlin: Reimer.

RIC = Mattingly, H., E.A. Sydenham, C.H.V. Sutherland, Percy H. Webb, P.M. Bruun and J.P.C. Kent 1923-1994. *The Roman Imperial Coinage*, 10 vols. London: Spink & Son.

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[76] Alföldi 1970: 167. We are told by the *Historia Augusta* that among the belongings of Commodus that were auctioned by Pertinax were 'robes of silk foundation with gold embroidery of remarkable workmanship; tunics, mantles and coats; tunics made with long sleeves in the manner of the Dalmatians and fringed military cloaks; purple cloaks made in the Greek fashion, and purple cloaks made for service in the camp' (*Hist. Aug.* Pert. 8.2., transl. D. Magie). Considering that the same author tells us that Commodus used the Dalmatic tunic – a long-sleeved one – in public (*Hist. Aug.* Comm. 8.8), we can assume that the military fashion of the late 2nd - early 3rd century AD was integrated into the public image of emperors, even more so if we consider that the same kind of tunic was used by Elagabalus.

[77] Coulston 2007; Waebens 2015; Gordón Zan 2017.

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Roman Soldiers or Others: Who Were the People Depicted on the Funerary Stelae from the Middle Strymon Valley?

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Abstract: The article analyses the depictions of standing male figures on 21 tombstones from the Middle Strymon Valley in present-day southwest Bulgaria, part of the Roman province of Macedonia. The figures are shown wearing short-sleeved *chitōnes* or long-sleeved tunics, with animal skin cloaks fastened with circular rings and leather boots. They hold various tools such as axes, pickaxes, rods (or bars), spears and javelins. Furthermore, there is an elongated textile object that resembles a bag. Their identification as Roman soldiers, so prevalent in the literature, is questioned. It is suggested that the images represent men involved in agricultural or mining activities.

Keywords: funerary reliefs, Roman provincial art, Roman provincial clothing, Roman tools, Roman province of Macedonia

Introduction

The Middle Strymon Valley is located in southwest Bulgaria (Figure 1). The region is a clearly defined geographical area surrounded by high and medium mountains. This geographical feature has contributed to the development of a distinct cultural identity and a relatively autonomous historical development. During the reign of Philip II (359-336 BC), the area was integrated into the Macedonian kingdom. Heraclea Sintica, the oldest known urban centre in the valley, was established as a Macedonian colony at that time.[1] The ancient city is situated in the village of Rupite, Petrich municipality. After 148 BC, the region came under Roman control and became part of the *provincia Macedonia.* During the Roman imperial period, urbanization led to the founding of two new urban centres: Neine, near the village of Dolna Gradeshnitsa, Kresna municipality, and Parthicopolis, under the modern town of Sandanski.[2]

Iconography

The Middle Strymon Region is known for its figural funerary reliefs featuring portrait images.[3] Of particular interest are a group of 21 tombstones[4] depicting men wearing either short *chitōnes* with short sleeves or tunics with long sleeves, and animal skin cloaks enveloping their backs and upper arms, fastened at the front with a large circular ring. In only five cases the lower garment was fastened with a belt with a ring buckle. They wear leather boots and hold a variety of objects, including axes (or hatchets), pickaxes, spears and javelins.

The tombstones represent men in five distinctive groups: as busts in family portraits, as single standing figures, as standing figures among family busts, with other standing figures, or as assistants to a Roman horseman and to *heros equitans*.

Two stelae belong to the first group. The tombstone found in Neine has six busts, arranged in two registers (cat. no. 1, Figure 2a). The upper row depicts a man and two women. They are dressed in *chitōnes* and *himatia*. The woman on the right is wearing her *himation* draped over her head. The lower register shows three male busts. The first man, positioned from left to right, is attired in a *chitōn* and a cloak that envelops his back and upper arms, fastened at the front with a large circular ring. The second one is a Roman soldier garbed in a *tunica* with a *sagum* over it. The third figure is depicted wearing a *chitōn* and a *himation*. The tombstone was erected by Aurelius Pyroulas, son of Onesimos, in memory of his aunt Skedese. It is likely that the woman in the centre of the upper register is Skedese, for whom Aurelius Pyroulas, the man on the left of the upper register, erected the tombstone. If so, it can be assumed that the woman on the right is his wife, and the lower register represents his sons. The word '*denarii*' is mentioned in the relief, followed by traces of erased letters.[5] It may be presumed that the value

[1] Nankov 2015: 19-25. For the archaeological surveys carried out at Heraclea Sintica, see Vagalinski 2022.

[2] For Neine, see Gerasimova-Tomova 1980; Sharankov 2020: 84, n. 14; Velkov 1963. For Parthicopolis, see Kolev 2015; Petrova and Petkov 2015. For the foundation of the latter city, see Sharankov 2016: 60-61.

[3] The tombstones from the Middle Strymon Valley are estimated to be around 300. See: Milcheva 2017: 200, n. 34. For primary literature on stelae and medallions with portraits, see Milcheva 2015: 292, n. 1.

[4] Two tombstones originate from Belo Pole village, Blagoevgrad region, and from Sirrha (Serres, Northern Greece), rather than the Middle Strymon Valley. Despite this, they exhibit similarities to the monuments in the region that influenced them.

[5] Sharankov 2020: 82, no. 6.

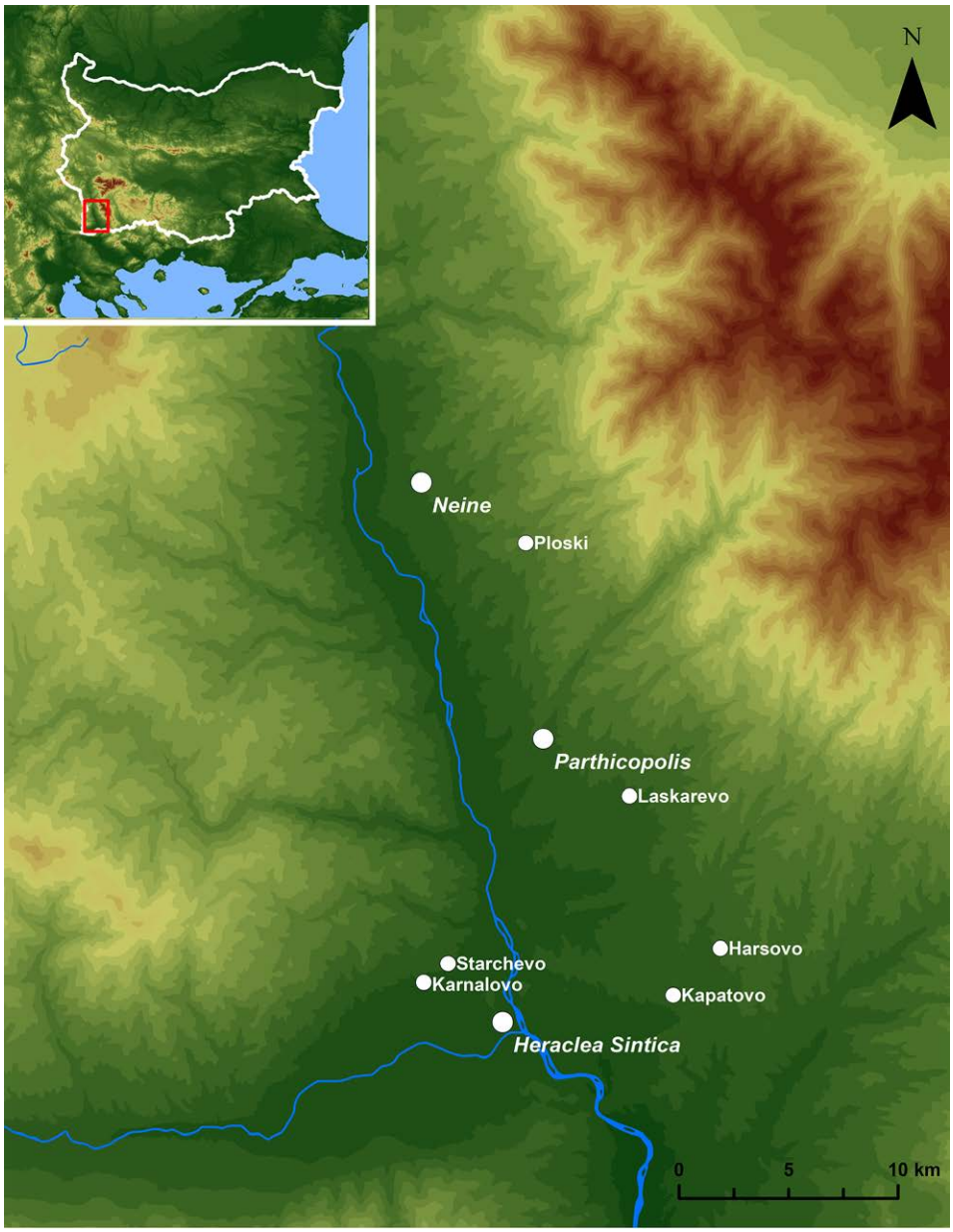

Figure 1: Map of the Middle Strymon Valley (author: Angel Grigorov).

of the worked slab was inscribed on it. This is the only tombstone with an inscription among the monuments studied here. The funerary stela dates back from the second quarter of the 3rd century AD.[6]

A similar scene is illustrated on a tombstone with family portraits from Heraclea Sintica (cat. no. 2, Figure 2b). The relief has five busts arranged in two registers. The upper register illustrates a man and a woman dressed in *chitōnes* and *himatia*. The woman wears her *himation* draped over her head. The lower register portrays three men attired in *chitōnes* and cloaks that cover their backs and upper arms, fastened at the front with a large circular ring. It is most likely that they are the sons of the couple depicted in the upper row. The tombstone is dated to the 20s-30s of the 3rd century AD.[7]

The second group of reliefs portrays individuals standing alone. An unpublished fragment of a tombstone from the Middle Strymon Valley illustrates a male figure dressed in a *chitōn* and a cloak of animal skin that envelops his back and arms, fastened at the front with a large circular ring (cat. no. 3, Figure 2c).[8]

[6] Alexandrescu-Vianu 1975: 195, no. 47.

[7] Milcheva 2017: 196.

[8] I would like to express my gratitude to Dr. Kiril Alexiev, the director of RHM-Blagoevgrad, for providing me with the opportunity to publish this monument. I am also grateful to my colleagues at the museum, Dr. Maria Pashova and Ivo Nikolov, for their assistance.

Figure 2: a) Tombstone from Neine (photograph: Philip Kolev); b) Tombstone from Heraclea Sintica (photograph: after Milcheva 2017: 212, fig. 12); c) Tombstone from the Middle Strymon valley (photograph: Philip Kolev); d) Tombstone from Neine (photograph: Philip Kolev).

His face is damaged. The left hand is extended forward with a slight bend at the elbow. The funerary stela was probably produced in the first half of the 3rd century AD.

Another tombstone depicts a standing male figure and comes from Neine (cat. no. 4, Figure 2d). From the waist downwards the image is missing. The man is wearing a tunic with long sleeves fastened with a round buckle on his belt and a cloak made of animal skin that covers his back and arms. The cloak is secured at the front with a large circular ring. His arms are in a slumped position, with the left arm missing. In his right hand, he holds an object that cannot be identified due to the preservation condition of the stela. The tombstone dates from the last quarter of the 3rd century AD.[9]

The last tombstone from this group is from the area of Sorakevo, the village of Harsovo (cat. no. 5, Figure 3a). The slab portrays a standing man wearing a short-sleeved *chitōn*, a cloak fastened at the front with a large circular ring and leather boots. The individual is holding a tool in his right hand, which is difficult to identify due to the state of the tombstone. The implement can be an adze, hoe or pick. His other hand is hanging down and holding a long object with a flared end.[10] The hand is

[9] Milcheva 2017: 199.

[10] The object appears on seven other funerary reliefs. See Figures 3b-

Figure 3: a) Tombstone from Harsovo (photograph: Philip Kolev); b) Tombstone from Starchevo (photograph: after Milcheva 2017: 213, fig. 13); c) Tombstone from Karnalovo (photograph: Philip Kolev); d) Tombstone from Heraclea Sintica (photograph: after Milcheva 2017: 214, fig. 17).

slightly open and the object passes over all four fingers and is held by the thumb above it. The way the man holds the object does not allow for determining whether the object is made of wood or metal. The material used may be either textile or leather. The tombstone can be dated to the second quarter of the 3rd century AD.

The third group presents standing figures at full height among family busts. Two tombstones, one from the village of Starchevo (cat. no. 6, Figure 3b) and the other from Karnalovo (cat. no. 7, Figure 3c), illustrate a very similar iconography of the standing man. Both reliefs depict family portraits arranged in two registers, with standing male figures occupying a central position. The tombstone from Starchevo portrays five busts. The upper row of the relief depicts a man, a girl and a woman from left to right, while the lower shows two boys with a standing man between them. In contrast, the relief from Karnalovo has a different composition. It only features two busts of a man and a woman in the upper register and a bust of a boy and a standing man in the lower. The men are depicted on both stelae wearing short-sleeved *chitōnes* and cloaks fastened at the front with large circular rings. They wear leather boots. Their left arms are bent at the elbow and hold an unidentified tool. However, the pattern is very similar

c, 4a, c, 5a, 6a-c.

Figure 4: a) Tombstone from the Middle Strymon valley (photograph: after Milcheva 2017: 214, fig. 20); b) Tombstone from Ploski (photograph: Philip Kolev); c) Tombstone from Heraclea Sintica (photograph: after Milcheva 2017: 212, fig. 11); d) Tombstone from Harsovo (photograph: Philip Kolev).

to that in Figures 4d and 5a, where the blades are very well recognisable. It has been suggested that the tool may have been an axe (*securis*). The right arms of the men are downwards, holding a long object with a flared end. The tombstones can be dated to the second quarter of the 3rd century AD.

The depiction of the man on a tombstone from Heraclea Sintica is slightly different (cat. no. 8, Figure 3d). The relief depicts three busts and a standing man, arranged in two registers. The upper row depicts a man and a woman, while the lower one represents a standing man and a woman. Once again, the figure of the standing man is at the centre of the composition. He is depicted similarly to the monuments from Starchevo and Karnalovo. However, in his right arm, he holds an object with a circular cross-section and a pointed tip instead of the long object with a flared end shown on the previously discussed stelae. Like the stelae described above, this one can also be dated to the second quarter of the 3rd century AD.

The following tombstone is certainly from the region of the Middle Strymon, but its precise location is unknown as it comes from a private collection (cat. no. 9, Figure 4a). The relief consists of two registers. The upper row shows a portrait of a man and a woman, while the lower one depicts a standing man, dressed in

a short-sleeved *chitōn* fastened with a round buckle on his belt and a cloak made of animal skin, covering his back and arms. The cloak is secured at the front by a large circular ring. The man wears leather boots. There is a pickaxe (*dolabra*) in the right hand of the deceased. The *dolabra* is a double-headed instrument combination of an axe and a pick, a pick and a hoe, or an axe and a hoe.[11] In this case, the tool consists of a hoe and a pick. The man holds the long object with a flared end in his left hand. The stela can be dated to the last third of the 3rd century AD.[12]

The funerary stela from the village of Ploski has a different composition (cat. no. 10, Figure 4b). The two registers characteristic of the monuments mentioned above are absent in this case. Central to the composition is the image of a standing man, dressed in a tunic with long sleeves fastened with a round buckle on his belt and a cloak made of animal skin, covering his back and arms. The cloak is secured at the front by a large circular ring. His right arm is in a slumped position and he is holding an item that cannot be identified due to the broken slab. He has a javelin in his left arm, which is bent at the elbow. On both sides, there are portraits of a man and a woman. The monument dates from the last quarter of the 3rd century AD.[13]

A family portrait from Heraclea Sintica consists of five busts and two standing male figures arranged in two registers (cat. no. 11, Figure 4c). The upper register depicts, from left to right, a woman and a man and between them a girl and a boy. All individuals are attired in *chitōnes* and *himatia*. The woman's *himation* covers her head. The standard iconography with the man on the left and the woman on the right is not followed here. The lower section portrays, from left to right, the figure of a standing man wearing a short-sleeved *chitōn*, a cloak made of animal skin fastened at the front with a large circular ring and leather boots. In his right hand, he holds an unidentified object, the purpose of which remains unclear. The item may represent a rod or a spear like men in Figure 4d. In the left hand, he holds a long object with a flared end. In the centre of the lower section there is the bust of a young man which has been badly damaged. To the right is the figure of a second standing man. He is represented in the same way as the other figure. The only difference is that he holds a *dolabra*, in the form of a pick and hoe, in his right hand. This funerary stela is unique in the group as it features two standing male figures, none of which dominate the relief. The tombstones can be dated to the second quarter of the 3rd century AD.

The fourth group includes funerary stelae depicting standing men along with other standing figures. The funerary stela discovered at Sorakevo, near the village of Harsovo, presents a combination of family portraits and standing figures (cat. no. 12, Figure 4d). The tombstone consists of two registers divided by a horizontal frame. The upper row depicts two standing men and a boy between them. The men are dressed in tunics with long sleeves fastened with a round buckle on their belts and cloaks made of animal skins, covering their backs and arms. The cloaks are secured at the front by large circular rings. The men wear leather boots and hold a spear in one hand and an axe in the other. The boy is dressed in a long-sleeved tunic. He holds a bunch of grapes in his right hand and a bird in his left. The lower row depicts the busts of a man and a woman attired in *chitōnes* and *himatia*. The woman's *himation* covers her head. The tombstone is dated to the second or third decade of the 3rd century AD.[14]

The fragment of the upper part of a tombstone from Neine represents the heads of a man and a woman (cat. no. 13). To the right of the man, an axe is depicted, which suggests that he may have held it in his left hand. The woman is dressed in a *chitōn* and *himation*. The production of the funerary stela can be dated to the middle of the 3rd century AD.

A tombstone from a private collection, originating from the Middle Strymon Valley, depicts a family as three standing figures (cat. no. 14, Figure 5a). On the left stands a girl dressed in a double-girded *chit*ōn. She holds an oval object in her right hand and a bunch of grapes in her left. In the centre is a male figure dressed in a short-sleeved *chitōn* and a cloak fastened at the front with a large circular ring. The man wears leather boots. His left arm is bent at the elbow and holds an axe, while his right arm is downwards and holds a long object with a flared end. The woman to his right is dressed in a *chitōn* and a *himation* draped over her head. The funerary stela dates to the 20s-30s of the 3rd century AD.

Three other standing figures are depicted on a tombstone from the area of Sorakevo, near the village of Harsovo (cat. no. 15, Figure 5b). In the centre of the composition, there is a woman wearing a *chitōn* and a *himation* that covers her head. To the left of her is a man. He wears a short-sleeved *chitōn*, a cloak made of animal skin fastened at the front with a large circular ring and leather boots. The man holds a tool in his right hand. In this particular place, the tombstone is broken and the tool is not visible. Nonetheless, it can be seen behind his shoulder: thus, it is probably a rod or a bar. In his left hand, the man holds a *dolabra*. Only one part of the tool – an axe – is visible, while the other is obscured by

[11] Cholakov 2010: 72, 125; White 1967: 62-64.
[12] Milcheva 2017: 197.
[13] Dimitrov 1941: 36-37, no. 35; Milcheva 2017: 199; Rüsch 1969: 165, no. R51.
[14] Milcheva 2017: 198-199.

Figure 5: a) Tombstone from the Middle Strymon valley (photograph: after Milcheva 2017: 213, fig. 14); b) Tombstone from Harsovo (photograph: Philip Kolev); c) Tombstone from Kapatovo (photograph: after Milcheva 2017: 215, fig. 24); d) Tombstone from Laskarevo (photograph: Philip Kolev).

the figure of the woman. To the right of the woman is a second man, whose figure is almost a mirror image of the first. He holds a *dolabra* in his right hand. Only one part of the tool – a pick – is visible, which is hidden behind the man's figure, while the other part is covered by the woman's clothing. Combining the two images, we can assume that the man holds a *dolabra*, which has an axe at one end and a pick at the other. In his left hand, he probably holds a rod or a bar. The tombstone is dated to the second or third decade of the 3rd century AD.[15]

A tombstone from the village of Kapatovo depicts a standing man in a very similar manner (cat. no. 16, Figure 5c). He is wearing a long-sleeved tunic, a cloak made of animal skin fastened at the front with a large circular ring and leather boots. The man holds in his right hand a hoe or adze. The tool possibly consisted of two parts (*dolabra*), but only one is visible due to the breaking of the slab. His left arm hangs down with nothing in it. A seated dog is portrayed on the left side of the man. The outline of a second human figure can be seen on the far left. The stela is dated to the second or third decade of the 3rd century AD.[16]

[15] Milcheva 2017: 198-199.

[16] Milcheva 2017: 199.

The last group of reliefs portrays assistants. In the centre of a grave medallion from the village of Laskarevo, a Roman soldier with his horse can be observed (cat. no. 17, Figure 5d). He wears a long-sleeved tunic belted with a round buckled belt. Over the tunic, he has a *sagum* covering his left shoulder. The deceased is depicted wearing also a second belt – a *balteus*. It runs across the chest and ends with a heart-shaped pendant. A *spatha* is suspended from the *balteus*. The upper part of the sword is missing. The man holds a *vitis* in his right hand and the horse's reins in his left. An altar is shown in front of the deceased. Behind the Roman soldier is the figure of his assistant. He is dressed like his master, but without the *sagum*, which has been replaced by an animal skin cloak fastened at the front with a large circular ring. In his right hand, he is holding a wooden stick, which appears to be a part of a tool. The medallion dates to the second quarter of the 3rd century AD.[17]

Another tombstone from Laskarevo depicts one of the men in question as an assistant of the *heros equitans* (cat. no. 18, Figure 6a). The stela consists of two relief registers. The upper one shows the horseman galloping to the right. Only the horse's legs and the rider's right leg are preserved. A running dog is depicted between them. To the right of the rider, there is the image of a woman whose legs have been preserved. On the left is his assistant. He is dressed in a *chiton* and a cloak fastened at the front with a large circular ring. The man wears leather boots. His right hand is downwards holding a long object with a flared end. In the lower register are two male portraits. At the centre of the composition is a Roman soldier. He wears a *tunica* and a *sagum* buckled with a round fibula over his right shoulder. To the left is a man dressed in *chitōn* and *himation*. The relief dates to the 20s-30s of the 3rd century AD.[18]

A funerary relief from the village of Belo Pole, Blagoevgrad region, located in the Upper Strymon Valley and part of the Roman province of Thrace, indicates its proximity to the monuments in the Middle Strymon Valley (cat. no. 19, Figure 6b). Only the upper left half of the tombstone has been preserved. The stela depicts a *heros equitans* galloping to the right. The image of the assistant and part of the horse are preserved. The man is dressed in a short-sleeved *chitōn* and a cloak fastened at the front with a large circular ring. He wears leather boots. His right arm is downwards holding a long object with a flared end and his left arm is bent at the elbow holding the horse's tail. The stela dates to the 20s-30s of the 3rd century AD.[19]

The next tombstone is now in the Louvre Museum in Paris (cat. no. 20, Figure 6c). Museum records indicate that the stela originated in the Roman province of Thrace. However, based on the stylistic analysis, it can be concluded that the funerary relief originates from the Middle Strymon Valley[20]. The tombstone consists of two relief registers. In the centre of the upper register is depicted *heros equitans* galloping towards the right. Below the horse are portrayed a dog and a boar facing each other. A tree and a woman sitting on a chair and dressed in a *chitōn* and a *himation* draped over her head are depicted in front of the horse. The rider's assistant is depicted behind the horse. He is dressed in a long-sleeved tunic and a cloak of animal skin fastened at the front with a large circular ring. The man wears leather boots. He is holding a spear in his right hand and a long object with a flared end in his left. In the centre of the lower register, two standing men are depicted full-length. The man on the left is holding a *phialē* in his right hand. Next to him, there are two portraits, one of a girl and one of a boy, lying on top of each other. Portraits of women dressed in *chitōnes* and *himatia* are depicted on both sides of the lower register. The funerary stela dates to the 20s-30s of the 3rd century AD.[21]

The last monument in this group is a tombstone from Sirrha (present-day Serres, Northern Greece) (cat. no. 21, Figure 6d). The upper register depicts *heros equitans* moving to the right and his assistant. The assistant is dressed in a long-sleeved tunic with a belt, the buckle of which is not visible from the horse's tail. An animal skin cloak is fastened with a circular ring over the tunic. The man wears leather boots. In his right hand, bent at the elbow, he holds a spear and in his left hand an axe or *dolabra*. A male head and part of the standing figure of a slave are preserved in the lower register. The tombstone dates to the second quarter of the 3rd century AD.[22]

Interpretation

This group of monuments is traditionally associated with Roman soldiers.[23] The first serious attempt to analyse the reliefs in question was made by Vasilka Gerasimova-Tomova. According to the author's observations the tombstones probably depict Thracian warriors who are dressed in the traditional costume of the Middle Strymon Valley, rather than Roman soldiers.[24] Based on the objects in their hands, Georgi Mitrev believes that the men were miners, warriors or professionals of other kind.[25] Rumyana Milcheva presents a thorough analysis of the funerary reliefs under examination. The author also claims that the

[17] Milcheva 2017: 195.
[18] Milcheva 2017: 196.
[19] Milcheva 2017: 197.
[20] Alexandrescu-Vianu 1975: 200; Milcheva 2017: 196.
[21] Milcheva 2017: 197.
[22] Rüsch 1969: 152, no. R16.
[23] Alexandrescu-Vianu 1975: 185, 200; Dimitrov 1941: 42–43; Nikolov 1970: 290.
[24] Gerasimova-Tomova 1981: 34-35.
[25] Mitrev 2011: 32, 44-45, no. 26.

Figure 6: a) Tombstone from Laskarevo (photograph: Philip Kolev); b) Tombstone from Belo Pole (photograph: Philip Kolev); c) Tombstone from the Middle Strymon valley (photograph: after Alexandrescu-Vianu 1975: fig. 4.1); d) Tombstone from Sirrha (photograph: after Rüsch 1969: 152, no. R16, fig. 79).

male figures are Roman soldiers.[26] She interprets the long object with a flared end as a *vitis*, which is a vine rod used by Roman centurions. The depicted axes and pickaxes are regarded as battle weapons.[27]

The interpretation of the male figures as soldiers is problematic for several reasons. The clothing worn by the group of men being discussed differs from the known depictions of Roman soldiers. During the 3rd century AD, when the stelae are dated, the soldiers of the Roman army typically wore a knee-length tunic with long sleeves (*tunica manicata*), a belt with a round buckle and a *sagum* fastened with a fibula over the right shoulder. Other hooded cloaks are also known, such as the *paenula* and the *caracallus*. The Roman soldiers may have bare legs or wear trousers.[28] This pattern is followed in seven tombstones of Roman soldiers originating from the Middle Strymon Valley.[29] Instead of a sagum, the images show a cloak. This has no parallel in the funerary reliefs of soldiers from other parts of

[26] Milcheva 2017.
[27] Milcheva 2017: 195-196.
[28] Bishop and Coulston 2009: 184; Stephenson 1999: 99-101; Sumner 2003: 10-11. For Roman military clothing in the 3rd century AD, see: Sumner 2003.
[29] Cat. no. 1, 17, 18, Milcheva 2017: 211, fig. 8, 212, fig. 10, 215, fig. 21 and one unpublished: RHM Blagoevgrad inv. no. 1.2.324 from Piperitsa. The iconography of a Roman standard bearer from the village of Debrene is different. See Milcheva 2017: 210, fig. 3.

the Roman empire.[30] Ten tombstones indicate that the cloaks are made of animal skin, as animal legs, likely of sheep, are visible.[31] It would be highly unusual if they were Roman soldiers. Moreover, it is difficult to explain the appearance of men wearing *saga*, along with those with animal skin cloaks.[32] In the case of cat. no. 14, it is very clear that the attendant, who most probably represents a slave of the Roman horseman, is wearing a cloak made of animal skin, as opposed to his master, who is represented wearing a *sagum*. Another problem is the absence in most images of the belt, which held significant symbolic importance for Roman soldiers.[33] It is present in all four reliefs of standing soldiers from the region.[34]

The second main reason is related to the objects held in the men's hands. Most images show axes and pickaxes (*dolabrae*), which, as I mentioned, are interpreted by R. Milcheva as battle weapons. In images of standing Roman soldiers from the Middle Strymon Valley, a sword is always present.[35] In contrast to the sword, the axe and the *dolabra* were not characteristic of the Roman offensive weapons of the 3rd century AD. The *dolabra* was a tool used by the Roman army as a marching instrument, for digging trenches, chopping wood and, in very rare cases, when circumstances demanded it, in battle.[36] However, this tool is more commonly used in agriculture for tilling the soil, cultivating various crops and digging around the base of vines.[37] The cultivation of a vineyard with *dolabra* is also attested by its appearance in combination with a billhook in funerary stelae from the Vardar River valley in the present-day Republic of North Macedonia.[38] This composition appears in numerous stelae from Asia Minor, too.[39] However, the instrument had other function. The long-handled *dolabra* (*dolabra fossoria*) was used by excavators and miners.[40]

I could not accept the interpretation of the elongated object as *vitis*. It should be noted that the *vitis* is a vine stick. However, the way in which the object is held by men differs from the wooden handles of tools. As I mentioned above, the hand is slightly open and the object passes over all four fingers and is held by the thumb above it. This is a proof that the object is made of textile or leather. The item widens at its lower end. The function of the object is difficult to interpret, but it is undoubtedly related to the general iconography of the reliefs. The same item is depicted on a tombstone from the village of Piperitsa (Figure 7a).[41] The funerary stela is decorated with family portraits and a standing figure of a boy between them[42]. The child is dressed in a short-sleeved *chitōn* and placed on a pedestal decorated with a garland. He is holding the object in question in his right hand and, most likely, a stick in his left hand. The same item is depicted on a tombstone from the Middle Strymon Valley (Figure 7b).[43] In this case, the Roman soldier has caught it on the lower end (Figure 7c). It is too big to be a purse for coins. However, it could be a bag with a larger capacity, perhaps a sack. The Roman sack (*saccus*) is a pliable bag, made of woven material. Its size ranges from that of a purse to a grain sack.[44]

Based on the above arguments, I disagree with the opinion that the studied images portray Roman soldiers. To interpret the male figures, it is important to consider their common features, such as the animal skin cloak fastened with a round ring and the leather boots. However, this garment has no parallels among the funerary stelae outside of the Middle Strymon Valley. The costume cannot be regarded as the traditional local male clothing, as suggested by V. Gerasimova-Tomova, since it is only depicted in these images. Rather, men's garments are linked to their profession. Their tools are undoubtedly an important element in their interpretation, as Georgi Mitrev suggested. Axes and pickaxes are commonly used for land cultivation, logging, excavation activities and mining. Therefore, it is likely that these men are farmers working in the vineyards, lumberjacks, quarrymen, or miners. Three reliefs depict tools that are difficult to interpret.[45] They may represent rods or bars (?). Tools representing the occupations of the deceased are depicted on another three tombstones from the area. On a tombstone with a *coena funebris* from a private collection, which comes from the region of the Middle Strymon, a billhook (*falx arboraria*, *falx putatoria*) is represented.[46] This tool is also depicted next to a male bust on another stela from the

[30] Milcheva 2017: 194.
[31] Cat. no. 3, 4, 10-12, 15-17, 20, 21.
[32] See cat. no. 1 and 18.
[33] Only five images feature a belt with a round buckle. See cat. no. 4, 9, 10, 12, 17.
[34] Cat. no. 17, Figure 7b, Milcheva 2017: 210, fig. 3, 212, fig. 10 and the unpublished stela from Piperitsa.
[35] Cat. no. 17, Figure 7b, Milcheva 2017: 212, fig. 10 and the unpublished stela from Piperitsa. The only exception is the tombstone from Debrene, where the man is depicted holding a standard.
[36] Bishop and Coulston 2009: 117, 185.
[37] Waelkens 1986: 40; White 1967: 63.
[38] Chausidis 2013: 663, pl. I 6,8, 671, pl. IX 1,2,4,7,8.
[39] Waelkens 1986: 127, no. 311, 136-137, no. 314, pl. 51, 141, no. 357, pl. 49, 142, no. 360, pl. 51, 150, no. 374, pl. 56, 163-164, no. 404, pl. 61, 172, no. 430, pl. 64, 216, no. 550, fig. 60, 217, no. 553, pl. 80, 218, no. 554, pl. 80, 226, no. 580, pl. 81, 227, no. 582, 583, 228, no. 586.
[40] White 1967: 63.
[41] NIAM, inv. no. 5710. White fine-grain marble. Dimensions: h. 72 cm; w. 57 cm (top) / 40 cm (bottom); th. 9 cm. Dimitrov 1941: 28, fig. 35, 115, no. 22; Rüsch 1969: 160-161, R36. The stela dates from the Severan period.
[42] I do not agree with the interpretation of D.P. Dimitrov that the boy was dressed as a soldier. See Dimitrov 1941: 115, no. 22. The typical clothing and weapons of the Roman soldier are missing.
[43] AM-Sandanski without inv. no. White fine-grain marble. Dimensions: diam. 70 cm; th. 6.5 cm, tenon h. 13 cm; w. 7 cm; th. 7 cm. Milcheva 2017: 195, 200, no. 3, 211, fig. 8.
[44] White 1975: 92.
[45] Cat. no. 8, 11, 15.
[46] NHM-Sofia, inv. no. 48293, B. Radev collection: Dimitrov 2017: 12, no. 12.

Figure 7: a) Tombstone from Piperitsa (photograph: Philip Kolev); b) Tombstone from the Middle Strymon Valley (photograph: Philip Kolev); c) Detail (photograph: Philip Kolev).

region.[47] The billhooks in the images suggest that the deceased were vine growers. Apparently two men from the territory of Neine were carpenters, as shown by the adzes (Gr. sing. σκέπαρνον, pl. σκέπαρνα) on their gravestones.[48] Depictions of men engaged in various professions such as drivers of four-wheeled wagons, sailors, gladiators, blacksmiths, fish sellers, etc., are known from tombstones from Thessalonica.[49]

The men holding spears in their hands seem to be more difficult to interpret. There are three funerary reliefs depicting a spear and one depicting a javelin.[50] On the tombstone from the Louvre (cat. no. 20) and Sirrha (cat. no. 21), the men are assistants to the heroised deceased, represented as *heros equitans.* It is possible that they are depicted with spears because they help the horseman by participating in the boar hunt. However, it is possible that they may have some connection to the deceased. Do they represent the dead's former occupation or are they somehow related to it? On the gravestone from the village of Harsovo, the men holding spears and axes may have some special occupations (cat. no. 12). I presume they were probably acting as guards for agricultural land, quarries, or mines in the area.

From the town of Melnik, only about 8 km from the ancient settlement in the area of Sorakevo, near the

[47] NHM-Sofia, without inv no. Sharankov 2020: 104, no. 80a, 105, fig. 24.
[48] In the area of Pushovets, near the village of Ilindentsi (*IGBulg* IV, 2254, Sharankov 2020: 82, no. 7) and the village of Ilindentsi (Sharankov 2020: 82, no. 7a).
[49] Adam-Veleni 2013: 771.
[50] Cat. no. 10, 12, 20, 21.

village of Harsovo, comes a votive tablet in honour of the god Asdoules, erected by a college of *saltarii* (guardians of an estate) in AD 214/215.[51] The horseman god is represented as Dionysus. He is accompanied by Pan, Silenus and a panther. In the background is a large vine from which two boys are harvesting with billhooks. The dedication of the *saltarii* to a deity associated with viticulture is probably related to the agricultural nature of the estate. There is some suggestion that the estate may have been large in size and an imperial domain.[52] In my opinion, the possibility that the men on the Harsovo tombstone were associated with such an estate should not be ruled out.

The combination of two spears and a *dolabra* (consisting of an axe and a pickaxe or hoe) are found in three graves from the necropolis in the locality of Gushterova chuka, located 29 km west of Heraclea Sintica in the Republic of North Macedonia.[53] A total of 186 graves were examined, of which 156 were cremations and only 30 were inhumations. Most of them date from the 1st to the 3rd century AD. In eight cremation graves, weapons were found. In most cases, spearheads were found in combination with knives. However, in grave no. 22a the assemblage includes a sword, two spearheads and a knife, and in no. 72 a sword was discovered.[54] In the area of Crveno Pole, 100 m west of the necropolis, there was a Roman settlement. Its inhabitants were mainly engaged in mining, ore processing and metallurgy. In almost every excavated house, a larger quantity of ore and slags was found. Additionally, a set of tools used in metallurgy was discovered.[55] It is possible that some of the individuals buried in the necropolis were involved in guarding ore mining, which is associated with the settlement.

Conclusion

Depictions of men wearing the distinctive animal skin cloaks and high boots are particularly characteristic and unique to the Middle Strymon region. The tools undoubtedly indicate their occupation, which could be related to land cultivation, logging, extracting stone or ore, or guarding property or products. Their profession, or professions, were easily recognizable and were probably considered too special or prestigious to be depicted on tombstones.

The men are predominantly represented as sons of a couple, although there are a few instances when they are depicted as heads of their own families, or most likely with siblings or other family members.[56] There are three exceptions where only one male figure is depicted on the tombstone.[57] It is more difficult to interpret them as assistants to Roman horseman and the *heros equitans.* It is possible that these images are related to the deceased persons who were heroised, either by reflecting their previous work or by being somehow connected to it. It is as such that they are depicted on the two stelae found outside the Middle Strymon Valley in Belo Pole, Blagoevgrad region (cat. no. 19) and from Sirrha (cat. no. 21).

The distribution of the funerary reliefs can be divided into four zones. The first includes Heraclea Sintica and its surroundings, from where five stelae originate.[58] It is suggested that they were made in the local workshop that functioned in the ancient city.[59] The predominant iconography features standing figures among family busts. However, there is one example of a man depicted as a bust in a family portrait. In most cases, individuals hold short-handled axes in one hand and *sacci* in the other. The exception is a stela depicting two men, one holding a *dolabra* and a *saccus*, the other an unidentified tool and a *saccus.* The archaeological excavations carried out in Heraclea Sintica revealed well-developed stonemasonry, as well as iron mining and agriculture, as main occupations of the inhabitants.[60]

The second zone includes Neine and its vicinity, from which four reliefs are known.[61] All iconographic types of figures are represented, except the assistants of the *heros equitans*. The only preserved tools are visible on two reliefs: one from the village of Ploski, which represents a javelin and a tool handle, and another from Neine, which depicts an axe. Surveys conducted in the area of the ancient city have revealed the existence of marble quarries and a lead mine.[62] The presence of lead is also an indicator of the existence of silver deposits. The region is also suitable for viticulture.

The area of Harsovo is the third zone, from where four tombstones originate.[63] The male figures are portrayed standing alone, between family busts and with other standing figures. They hold various combinations of tools, including only a *dolabra*, a *dolabra* and a rod or bar, an adze, hoe or pick in one hand and *saccus* in the other, and a spear and an axe. The area is splendidly suited for the development of agriculture, especially viticulture. In the course of archaeological field surveys

[51] *IGBulg* IV, 2319; Manov: 2008, 109, no. 116; Tataki 2006: 173, no. 12. Κλαυδιανός Πύρρος καὶ Πύρρος / Λάνδρου καὶ οἱ περὶ αὐτοὺς ‹σ›αλτάριοι / θεῷ Ασδουλῃ, τῷ ϛμσ΄ ἔτι.
[52] Gerov 1988: 80.
[53] Graves no. 11, 55, 59. Sekulov 2022: 70.
[54] Sekulov 2022: 69-70.
[55] Sekulov 2017: 438.
[56] As children of a couple, see cat. no. 1, 2, 6-12; as *pater familias*, see cat. no. 14; with siblings, see cat. no. 15.
[57] Cat. no. 3-5.
[58] Cat. no. 2, 6-8, 11.
[59] Milcheva 2017: 198. For other monuments created in this sculpture workshop, see Milcheva 2017: 198, n. 29.
[60] Vagalinski 2022: 97-100.
[61] Cat. no. 1, 4, 10, 13.
[62] Petrova 2017: 153-154.
[63] Cat. no. 5, 12, 15, 16.

at the ancient settlement in the area of Sorakevo near the village of Harsovo a team led by Dr. Metodi Zlatkov (NAIM-BAS) discovered numerous iron slag deposits associated with metal processing.[64]

It is noteworthy that no funerary reliefs of the type under consideration have been found at Parthicopolis. Nevertheless, a fourth zone stands out nearby, in the village of Laskarevo. Two stelae originate from there.[65] They depict assistants of a Roman soldier and a *heros equitans*. The only object that could be identified was a *saccus* held by the man on the tombstone cat. no. 18.

Catalogue

1. Funerary stela of Aurelius Pyroulas in memory of his aunt Skedese (Figure 2a).
Findspot: Neine.
NHM-Sofia, without inv. no.
Material: White fine-grain marble.
Dimensions: h. 71 cm; w. 62 cm; th. 10 cm; letters 1.5-2 cm.
Condition: The tombstone is broken into two pieces. The lower right corner is missing and parts of the left frame are damaged. The slab ends with a tenon at the bottom.
Inscription: frame: Αὐρ(ήλιος) Πυρουλας Ὀνησείμου τῇ νείνῃ Σκεδεσῃ μνή[μ]ης· χάριν relief field: δηναρείων.
Date: Second quarter of the 3rd century AD.
Bibliography: Alexandrescu-Vianu 1975, 195, no. 47; *IGBulg* IV, 2252; *IGBulg* V, 5880; Manov 2008: 78, no. 17; Sharankov 2020: 82, no. 6; Velkov 1963: 148-149, no. 2.

2. Funerary stela with family busts presented in two rows (Figure 2b).
Findspot: Heraclea Sintica.
HM-Petrich, inv. no. 165.
Material: White fine-grain marble.
Dimensions: preserved h. 45 cm; w. 36 cm; th. 3.5 cm.
Condition: The lower part of the tombstone is missing. The frame is damaged.
Inscription: No.
Date: 20s-30s of the 3rd century AD.
Bibliography: Milcheva 2017: 196, 201, no. 7, 212, fig. 12; Mitrev 2011: 46, no. 30, fig. 37.

3. Upper part of funerary stela (Figure 2c).
Findspot: Middle Strymon Valley.
RHM-Blagoevgrad, without inv. no.
Material: White fine-grain marble.
Dimensions: preserved h. 28 cm; preserved w. 25 cm; th. 5.8 cm.
Condition: The tombstone is broken and only the upper part is preserved.
Inscription: No.
Date: First half of the 3rd century.
Bibliography: unpublished.

4. Funerary stela with a standing male figure (Figure 2d).
Findspot: Neine.
AM-Sandanski, inv. no 72.
Material: Marble.
Dimensions: preserved h. 46 cm; w. 41 cm; th. 10 cm.
Condition: The lower part of the tombstone is missing.
Inscription: No.
Date: Last quarter of the 3rd century AD.
Bibliography: Gerasimova-Tomova 1981: 30, no. 2, fig. 3; Milcheva 2017: 199, 204, no. 20, 216, fig. 25; Nikolov 1970: 290, no. 1, fig. 13.

5. Funerary stela with a standing male figure (Figure 3a).
Findspot: Sorakevo area, village of Harsovo.
RMH-Blagoevgrad, registered under inv. no. 9 from HM-Melnik.
Material: White fine-grain marble.
Dimensions: h. 45 cm; w. 36 cm; th. 4 cm.
Condition: The tombstone is broken into two parts. A piece of the left side is missing. The slab ends with a tenon at the bottom.
Inscription: No.
Date: Second quarter of 3rd century AD.
Bibliography: Gerasimova-Tomova 1981: 34, no. 9, fig. 11; Gerasimova-Tomova 1989: 171–172, no. 18, fig. 18; Milcheva 2017: 197, 202, no. 13, 214, fig. 18.

6. Funerary stela with family busts and a standing male figure (Figure 3b).
Findspot: village of Starchevo.
HM-Petrich, inv. no. 50.
Material: White, medium-grain marble.
Dimensions: preserved h. 63 cm; w. 42 cm (bottom) / 50 cm (top); th. 7 cm.
Condition: The slab is broken. Two parts are preserved. The upper right corner and the lower left corner with part of the tenon are missing.
Inscription: No.
Date: Second quarter of the 3rd century AD.
Bibliography: Milcheva 2017: 197, 202, no. 10, 213, fig. 15; Mitrev 2011: 47, no. 34, fig. 39.

7. Funerary stela with family busts and a standing male figure (Figure 3c).
Findspot: village of Karnalovo.
NAIM, inv. no. 6268.
Material: White, medium-grain marble.
Dimensions: h. 51 cm; w. 32 cm (bottom) / 25 cm (top); th. 7 cm; tenon: h. 6 cm; w. 13 cm; th. 4.5 cm.

[64] Zlatkov *et al.* in press. I would like to thank my colleague, Dr Metodi Zlatkov, for providing me the information.
[65] Cat. no. 17, 18.

Condition: The left edge is damaged. The slab ends with a tenon at the bottom.
Inscription: No.
Date: Second quarter of the 3rd century AD.
Bibliography: Alexandrescu-Vianu 1975, 185, 195, no 37, pl. 2/3; Dimitrov 1941: 42–43, 44, fig. 62, 121, no. 43; Milcheva 2017: 197, 202, no. 11, 213, fig. 16; Rüsch 1969: 162, no. R41; Velkov 1932: 313, fig. 241.

8. Funerary stela with family busts and a standing male figure (Figure 3d)
Findspot: Heraclea Sintica.
HM-Petrich, inv. no. 163.
Material: White fine-grain marble.
Dimensions: h. 50 cm; w. 39 cm (bottom) / 43 cm (top); th. 4 cm.
Condition: The tombstone is broken into three parts. Pieces of both sides and top are missing. The slab ends with a tenon at the bottom.
Inscription: No.
Date: Second quarter of the 3rd century AD.
Bibliography: Milcheva 2017: 197, 202, no. 12, 214, fig. 17; Mitrev 2011: 45, no. 27, fig. 33.

9. Funerary stela with family busts and a standing male figure (Figure 4a)
Findspot: Middle Strymon Valley
NHM-Sofia, B. Radev collection no. 7697/31.03.2010.
Material: White fine-grain marble.
Dimensions: preserved h. 52 cm; w. 43 cm; th. 4 cm.
Condition: The tombstone is broken in two parts. A piece of the left corner is missing.
Inscription: No.
Date: Last third of the 3rd century AD.
Bibliography: Dimitrov 2017: 23, no. 32; Milcheva 2017: 197, 203, no. 15, 214, fig. 20.

10. Funerary stela with family busts and a standing male figure (Figure 4b).
Findspot: village of Ploski.
NAIM-Sofia, inv. no. 6347
Material: White fine-grain marble.
Dimensions: preserved h. 44 cm; preserved w. 49 cm; th. 10 cm.
Condition: The lower right corner is missing.
Inscription: No.
Date: Last quarter of the 3rd century AD.
Bibliography: Alexandrescu-Vianu 1975, 195, no. 50; Dimitrov 1941: 36-37, fig. 50, 118, no. 35; Gerasimova-Tomova 1981: 29-30, no 1, fig. 2; Milcheva 2017: 199, 204, no. 21, 216, fig. 26; Rüsch 1969: 165, no. R51; Velkov 1936: 89-90, no. 7, fig. 77.

11. Funerary stela with family busts and two standing male figures (Figure 4c).
Findspot: Heraclea Sintica.
HM-Petrich, inv. no. 144.
Material: White fine-grain marble.
Dimensions: h. 60 cm; w. 38 cm; th. 5 cm.
Condition: The slab is well preserved. It ends with a tenon at the bottom.
Inscription: No.
Date: Second quarter of the 3rd century AD.
Bibliography: Milcheva 2017: 196, 201, no. 6, 212, fig. 11; Mitrev 2011: 44-45, no. 26, fig. 32.

12. Funerary stela with three standing figures and family busts (Figure 4d).
Findspot: Sorakevo area, village of Harsovo.
RMH-Blagoevgrad, registered under inv. no. 34 and 38 from HM-Melnik.
Material: White fine-grain marble.
Dimensions: preserved h. 56 cm; w. 46 cm; th. 6 cm.
Condition: The tombstone is broken into two parts. Part of the lower half and the upper frame are missing.
Inscription: No.
Date: Second or third decade of the 3rd century AD.
Bibliography: Gerasimova-Tomova 1981: 32, no. 3, fig. 4; Gerasimova-Tomova 1989: 170–171, no. 16, fig. 16; Milcheva 2017: 198-199, 203, no. 17, 215, fig. 22.

13. The upper part of a tombstone with standing figures.
Findspot: Neine.
Lost (?) *Non vidi.*
Material: Marble.
Dimensions: preserved h. 24 cm; preserved w. 10 cm; th. 35 cm. The dimensions provided by the author do not correspond to the proportions of the slab.
Condition: The upper part of the tombstone is preserved.
Inscription: No.
Date: The middle of the 3rd century AD.
Bibliography: Gerasimova-Tomova 1981: 32-32, no. 5, fig. 7; Velkov 1963: 153-154, no. 13, fig. 20. In the first publication, the funerary relief has a representation of a man and a woman (Velkov 1963: 153-154, no. 13, fig. 20). Later, when Vasilka Gerasimova-Tomova described the relief, the part with the woman's head was missing (Gerasimova-Tomova 1981: 32-32, no. 5, fig. 7).

14. Funerary stela with three standing figures (Figure 5a).
Findspot: Middle Stymon Valley.
NHM-Sofia, inv. no. 39412, B. Radev collection.
Material: White fine-grain marble.
Dimensions: preserved h. 54 cm; w. 39 cm; th. 3.5 cm.
Condition: The tombstone is damaged at the top, with the upper left corner missing. It ends with a tenon at the bottom.
Inscription: No.
Date: 20s-30s of the 3rd century AD.
Bibliography: Dimitrov 2017: 19, no. 25; Milcheva 2017: 197, 201-202, no. 9, 213, fig. 14.

15. Funerary stela with three standing figures (Figure 5b).
Findspot: Sorakevo area, village of Harsovo.
RMH-Blagoevgrad, registered under inv. no. 5 from HM-Melnik
Material: White fine-grain marble.
Dimensions: preserved h. 46 cm; w. 45 cm; th. 6 cm.
Condition: The lower part is missing. The upper and left frame a broken.
Inscription: No.
Date: Second or third decade of the 3rd century AD.
Bibliography: Gerasimova-Tomova 1981: 32, no. 4, fig. 6; Gerasimova-Tomova 1989: 171, no. 17, fig. 17; Milcheva 2017: 198-199, 203, no. 18, 215, fig. 23.

16. Fragment of funerary stela with standing male figure (Figure 5c).
Findspot: village of Kapatovo.
RMH-Blagoevgrad, inv. no. 1.2.210. *Non vidi.*
Material: White medium-grain marble.
Dimensions: h. 47 cm; w. 22 cm (bottom) / 19 cm (top); th. 4.5 cm.
Condition: The tombstone is broken into two parts. The left half is missing. The slab ends with a tenon at the bottom.
Inscription: No.
Date: Second or third decade of the 3rd century AD.
Bibliography: Milcheva 2017: 199, 203, no. 19, 215, fig. 24.

17. Funerary medallion with horseman and assistant (Figure 5d).
Findspot: village of Laskarevo
NAIM-BAS, inv. no. 6328.
Material: Coarse-grain white marble.
Dimensions: preserved h. 40 cm; w. 65 cm; th. 8 cm.
Condition: Grave medallion in which the lower part is lost and has been restored.
Inscription: No.
Date: Second quarter of the 3rd century AD.
Bibliography: Dimitrov 1946: 11-12, no. 6, 14, fig. 9; Gerasimova-Tomova 1981: 33, no. 6, fig. 8; Milcheva 2017: 194-195, 200, no. 2, 211, fig. 6; Velkov 1936: 95, no. 16, fig. 87.

18. Fragment of funerary stela with *heros equitans*, his assistant and family busts (Figure 6a).
Findspot: village of Laskarevo.
NAIM-BAS, inv. no. 6307.
Material: White fine-grain marble.
Dimensions: preserved h. 57 cm; preserved w. 38 cm; th. 9 cm.
Condition: The left part of the tombstone is preserved.
Inscription: No.
Date: 20s-30s of the 3rd century AD.
Bibliography: Dimitrov 1941: 38, fig. 55; 119, no. 38; Milcheva 2017: 196, 201, no. 4, 212, fig. 9; Rüsch 1969: 162-163, no. R43; Velkov 1936: 93, no. 13, fig. 83.

19. Fragment of funerary stela with *heros equitans* and his assistant (Figure 6b).
Findspot: village of Belo Pole.
RMH-Blagoevgrad, inv. no. 1.2.247.
Material: White medium- to coarse-grain marble.
Dimensions: preserved h. 25.5 cm; preserved w. 18 cm; th. 4 cm.
Condition: The left upper part of a tombstone.
Inscription: No.
Date: 20s-30s of the 3rd century AD.
Bibliography: Gerasimova-Tomova 1981: 33-34, no. 7, fig. 9; Milcheva 2017: 197, 202-203, no. 14, 214, fig. 19.

20. Fragment of funerary stela with *heros equitans*, family busts and standing male figures (Figure 6c).
Findspot: Middle Strymon Valley.
Louvre Museum inv. no MND 1370. *Non vidi.*
Material: Marble.
Dimensions: h. 67 cm; w. 58 cm.
Condition: The lower left corner and the upper and lower right corners are broken.
Inscription: No.
Date: 20s-30s of the 3rd century AD.
Bibliography: Alexandrescu-Vianu 1975: 200; Milcheva 2017: 196.

21. Fragment of funerary stela with horseman and his assistant (Figure 6d)
Findspot: Sirrha.
Istanbul, Arch. Museum inv. no. 776. *Non vidi.*
Material: Grey marble.
Dimensions: preserved h. 56.6 cm; preserved w. 46 cm; th. 12.5 cm.
Condition: The left upper quarter of a tombstone.
Inscription: No.
Date: Second quarter of the 3rd century AD.
Bibliography: Milcheva 2017: 194, n. 18; Rüsch 1969: 152, no. R16, fig. 79.

Abbreviations/editions

IGBulg IV = Mihailov, G. (ed.) 1966. *Inscriptiones Graecae in Bulgaria repertae*. Vol. IV *Inscriptiones in Territorio Serdicensi et in vallibus Strymonis Nestique repertae*. Sofia: Bulgarian Academy of Sciences.
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Clothing on the Eastern Border of the Roman Empire: Parthian Military Costumes on Statues in the Museum of Şanlıurfa (ancient Edessa in Osrhoene) in Southeastern Turkey

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Dedicated to the 80th birthday of Jean-Paul Descoeudres

Abstract: This paper presents six Roman funerary statues found in Edessa, in ancient Osrhoene, currently curated in the Archaeological Museum of Şanlıurfa in southeastern Turkey. The people they depict wear military costumes in the manner of the Roman East. Our goal is to present military costumes from the eastern areas of the Roman Empire, i.e. in the periphery of Edessa, Hatra and Palmyra. These limestone male statues, belonging to the elites of Roman Edessa, reflect a certain richness of ornamentation and detail. The contacts between Parthians, Arabs, Greeks and Romans over a long span of time in Edessa and Osrhoene are visible on these carved costumes, which have to be checked and compared with other main centres in Mesopotamia, northern Syria and even Armenia.

The appendix will present a further limestone statue that is curated at the Museum of Tarsus and could have probably originated from Osrhoene.

Keywords: eastern Syria, Edessa, military costumes, northern Mesopotamia, Osrhoene, Palmyra, Roman East, Roman funerary sculpture, Şanlıurfa, southeastern Turkey, Tarsus

Introduction

In the funerary iconography of the Near East, figural representations gain prominence in the Roman period with single male figures, whose types and styles of dress help in their identification. In such representations in the Roman East, these often bearded men wear mostly civic cloaks (*himatia*) or military uniforms with tunics, trousers and weapons.[1] The distinctive colouring or patterning of these deceased men's garments may have enabled visitors to their graves to immediately identify them as key characters. Iconographically, in these regions, divinities, priests and priestesses, as well as dignitaries, wore long-sleeved garments. It is also generally believed that the long-sleeved dress may designate a supplicant in cultic dress at the grave of the deceased;[2] this feature is identified especially from the contexts of their iconographies. Clothing, in particular, is a clue for differentiating funerary figures from votive, architectural or other relief figures. The main aim of this paper is to study the garments depicted on some lesser-known Roman funerary monuments from Edessa based on six sculptures from the Archaeological Museum of Şanlıurfa.

The ancient city of Edessa, today Şanlıurfa, was of exceptional strategic importance on the southeastern border of the Roman Empire, especially in the 2nd and 3rd centuries AD (Figure 1).[3]

Although the modern settlement of over two million inhabitants has largely covered and destroyed most traces of the ancient past, the few surviving remnants reveal signs of great wealth. From a military point of view, the city's fame is linked to the battle that took place near its walls in AD 260, which saw King Shapur defeat the Roman army and capture emperor Valerian.

As late as 2009, Sylvia Winkelmann complained that archaeological excavations had not been carried out in the area.[4] However, rescue excavations were carried out in the necropolis area only a few years later, completely

[1] It should be noted however that the *himation* is of Greek origin, whereas the tunic and the trousers are the local masculine dress of Iranian origin (see Goldman 1994: 179), and the weapons are a hint to the military careers embraced by the individuals depicted.
[2] Thimme 1964: 19-20.
[3] Segal 1970: 110-118.
[4] Winkelmann 2009: 334. For a more recent assessment on the sculptural material of the region, cf. Bobou *et al.* 2023 (with an overview of past research); Çobanoğlu 2023.

Figure 1: Referred places in southeastern Turkey and the Near East (drawing: F.H. Kaya).

improving the situation in this respect (Figure 2). The collection of statues has now been enriched with three new examples in the round, which shed new light on the local clothing in Roman Osrhoene.

The archaeological research and evidence preserved in the Archaeological Museum of Şanlıurfa and the surroundings of the ancient city of Edessa offer us a detailed picture of the variety of people and, consequently, of how the inhabitants of the area once dressed.

Before starting the analysis of these pieces of evidence, it is useful to mention that there are some very important terms of reference for them: the depictions of emperors dressed in military uniforms in the Roman Near East, known from only a few sculptural monuments. For example, at Naqsh-e Rostam a high relief depicts Shapur I on horseback holding Valerian as a prisoner by his hands, while Philip the Arab asks for clemency on his knees (Figure 3a).

Several reliefs depict the same Shapur and, in a few cases, we find the body of the emperor Gordian III: a summary of the relationships that took place over the course of a few decades between the Sassanids and the Roman Empire.[5] The two emperors obviously do not bear the signs of imperial dignity, but nevertheless wear Roman dress and a helmet. Philip the Arab has a *paludamentum* fixed on the right shoulder by a brooch and a *cingulum* with a circular brooch (adjusted to seem centred to the viewer), as was typical in the 3rd century AD.[6] His sword, on the left, hangs from the *balteum*. Valerian, on the other hand, has a *cingulum* with two underhanging ribbons that form semicircles in the Hellenistic, then Roman, and finally Parthian style.[7] The sculptor's Parthian style is revealed by the decorative way in which the folds of Philip the Arab's *paludamentum* are rendered. The scene of Valerian's capture appears in a cameo curated in the Cabinet des Médailles of the Bibliothèque Nationale de France,[8] which highlights the different clothing of the two antagonists (Figure 3b). However, one should also take into account that the depictions of the Roman military uniform in the Near East were merely simple visual reminders of the Empire and that the relief – as well as the gem discussed above – were media meant to cater to a different public. Their artisans may have had distinct knowledge of the local dress of the Roman Near East;[9] particularly in the case of the gem, the gem cutter might have used conventions and did not render the actual dress. Most likely, the cutter created a stock product whose ambiguity allowed the customer to find what he/she wanted in a particular image.

[5] Ghirshman 1962: 161, fig. 205.

[6] See Coulston 2007.

[7] Cadario 2020: 247-248, figs. 13-15 (perhaps Agrippa and Hadrian).

[8] Acc. no. Camée 360. On which already: Babelon 1894: 85; 1897; most recently Seymour and Fowlkes-Childs 2019: 257.

[9] On the local dress in the Roman Near East, cf. Goldman 1994: 163 ff.

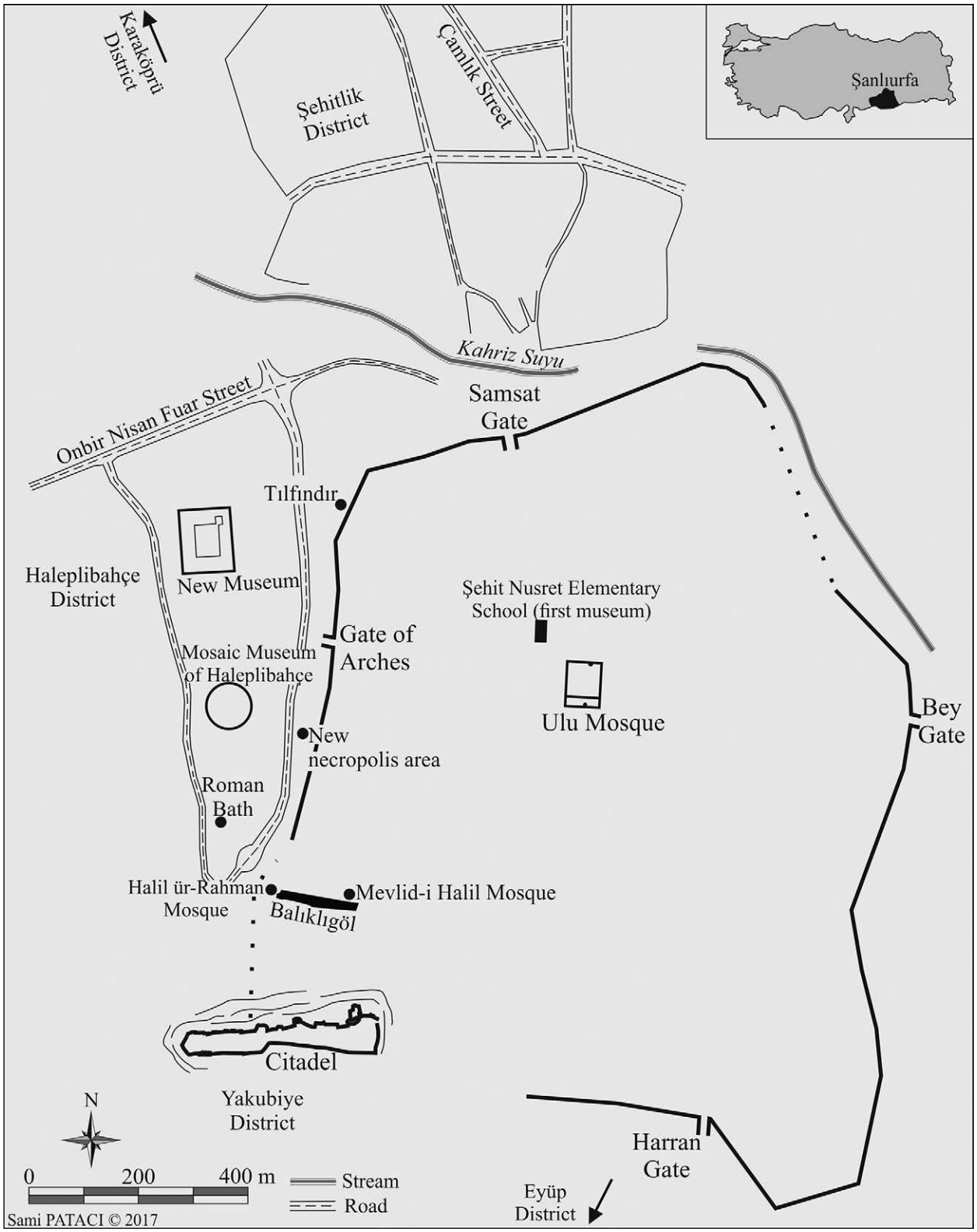

Figure 2: Plan of Roman and Early Byzantine Edessa, based mainly on Segal 1970 (drawing: S. Patacı).

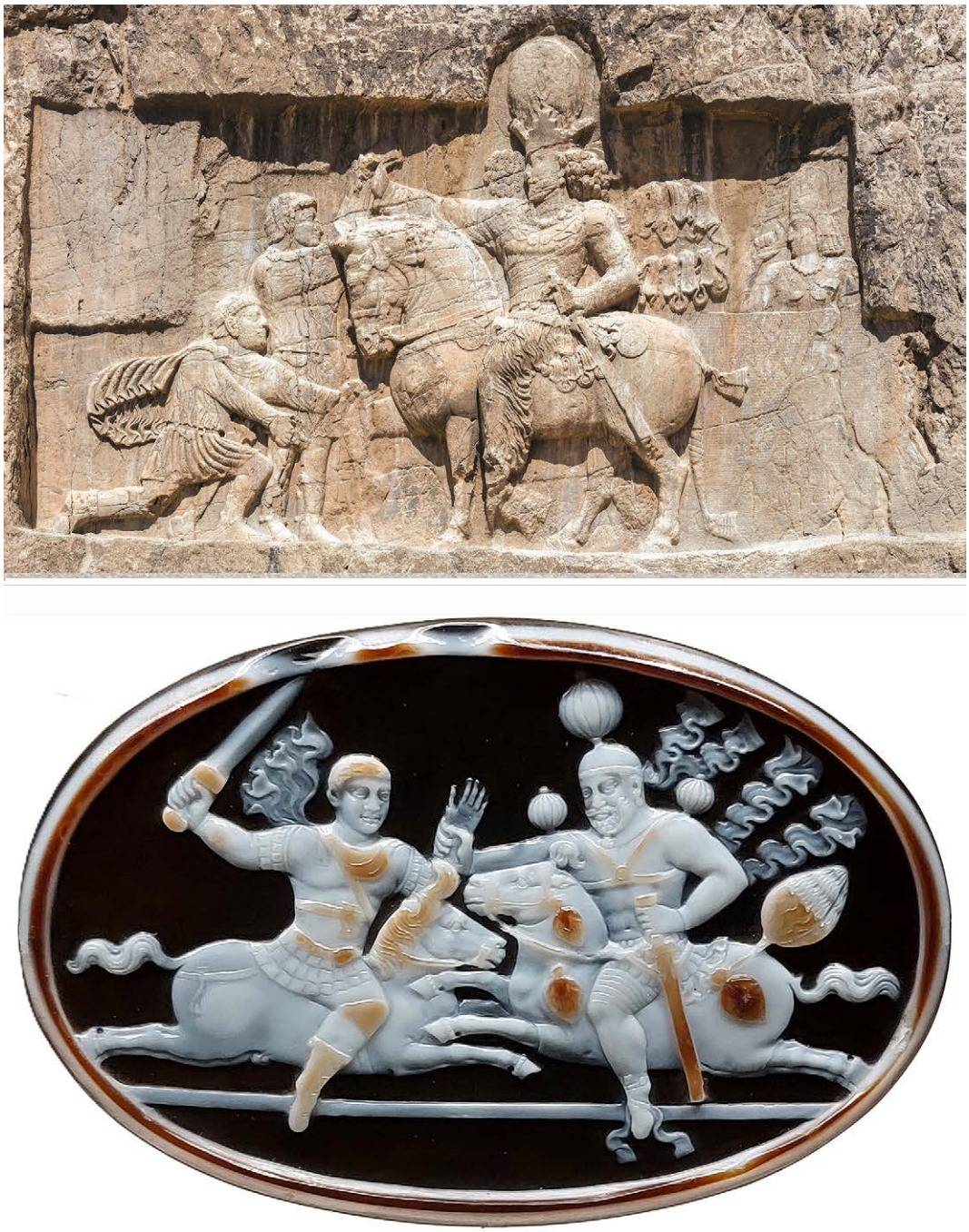

Figure 3: a) Relief of triumph of Shapur I over Valerian at Naqsh-e Rostam (*c.* AD 241-272), located 3 km north of Persepolis, Iran (photograph: Diego Delso, delso.photo via Wikimedia Commons, CC BY-SA 4.0); b) Cameo with Valerian and Shapur I in the Cabinet des Médailles of the Bibliothèque nationale de France, acc. no. Camée 360 (photograph: Liviu Mihail Iancu).

The local dress of Edessa and Osrhoene on the sculptural examples at Şanlıurfa

Numerous statues and reliefs in local limestone that date back to Roman times are housed in the Archaeological Museum of Şanlıurfa.[10] Some works of sculpture clearly highlight the local ways of dressing, typical of Late Parthian culture. In the following catalogue, the six most significant materials from this less-known collection are presented. The first part of our study focuses on three pieces from various sites in Osrhoene preserved in the Archaeological Museum of Şanlıurfa and the latter part adds three further examples that were excavated in the necropolis of Edessa at Kızılkoyun and are curated by the same museum. In particular, this

[10] On these sculptural finds, cf. e.g. Laflı and Christof 2014; Laflı 2016; 2018; Çobanoğlu 2023.

second group helped date more accurately the former three examples. By comparing our six pieces from Edessa to some securely dated sculptures, we intend to elaborate on the characteristics of the clothing on Edessan sculptures and also propose a relative chronology to be established through stylistic analysis.

In this corpus, the rationale for assigning a sculptural find to one century or another is based on general observations, parallels and style; therefore, the dates herein assigned to sculptures are conservative and should be considered rough approximations.

No. 1

A stela bears the upper part of a military figure (Figure 4).[11] Below is the inscription in Old Syriac, in local characters and style: 'This sculpture is Šamašyahb's son Lišamaš. His brother, Barnay, made it for him. Whoever destroys this, will be punished by the [god] Sin'.

The stela was published by several scholars,[12] among which E. Laflı in 2016;[13] two years later, it was re-published by John F. Healey[14] in relation to its inscription concerning the lunar divinity, who was also worshipped in Sumatar, located 60 km southeast of ancient Edessa. The onomastic is fully Old Syriac: the names 'Lišamaš' and 'Barnay' also appear in Palmyra, situated 368 km southwest of Edessa;[15] indeed, 'Lišamaš' was very common in Palmyra.[16]

As stated above, the upper part depicts the upper half of a man with a mantle[17] clasped to the right shoulder by a circular fibula. This fibula is a common element of local tradition, as seen, for example, on the relief of Antiochus I Theos (69-36 BC) and the Hercules-Artagnes-Ares found at Arsameia on the Nymphaeus in Commagene (southeastern Turkey), today housed in the Archaeological Museum of Gaziantep (Figure 5a).[18] A fold of the mantle hangs from the fibula,[19] a detail that can also be observed on a stela from Palmyra curated in the Berkshire Museum at Pittsfield (Figure 5b).[20] Therefore, this way of fastening the cloak and the type of fibula that holds it are common both to Edessa and Palmyra and were commonly used by the sculptors of these two metropoleis.

Figure 4: Limestone stele cat. no. 1 from Sumatar with its inscription in Old Syriac, Archaeological Museum of Şanlıurfa, acc. no. 41 (photograph: E. Laflı).

The circular fibula – notably, without the hanging edge of the robe – fastens the cloak on the right shoulder of the Palmyrene god Shadrafa, who wears a Roman military costume with a round shield, *lancea* and sword on a limestone votive stela from Palmyra that was dated to AD 55 and is now preserved in the British Museum.[21] Another limestone bust from a Palmyrene funerary relief, again in the British Museum, presents the same richly decorated fibula, but without the fold of the mantle as depicted in our stela no. 1 from Edessa.[22] A similar fibula is depicted on the Palmyrene stela of the

[11] Acc. no. 41; preserved height 78 cm, maximum height 110 cm, width 38 cm. It was found in Edessa.
[12] Winkelmann 2009: 338; Drijvers and Healey 2016: 153.
[13] Laflı 2016: 446; Karul *et al.* 2017: 425, top.
[14] Healey 2018: 56-57.
[15] The former name was found in the dedication of a statue erected in his honour in AD 45 (Hauser 2007: 245), transcribed as *Lishamash* in *CIS* II 3978 of AD 85, cf. Dijkstra 1995: 103.
[16] Stark 1971: 29-30, 93, where it is explained as 'belonging to Šamaš'; Cussini 2004: 242.
[17] On other performances in Edessa with mantle over the tunic, see Bobou *et al.* 2023: 10.
[18] Acc. no. 107.26.00. Cf. Ghirshman 1962: 67, fig. 80. A similar fibula also appears in mosaic depictions, see Bobou *et al.* 2023: 13, fig. 17.
[19] This unique and very detailed way of rendering the folds appears to be peculiar to the sculptor; it is not present on other works and, indeed, might be a quintessentially artistic feature of Edessan local sculpture.
[20] Acc. no. 1903.7.2. Cf. Heyn 2010: 642, fig. 10; Heyn and Raja 2021. Winkelmann did not notice this detail.
[21] Height 47.3 cm, width 33 cm, depth 13.5 cm, acc. no. 125206. Cf. Seymour and Fowlkes-Childs 2019: 154-155, cat. no. 100.
[22] Height 63 cm, width 52.5 cm, acc. no. 125033 or 1895,0401.7. Cf. Seymour and Fowlkes-Childs 2019: 154-155.

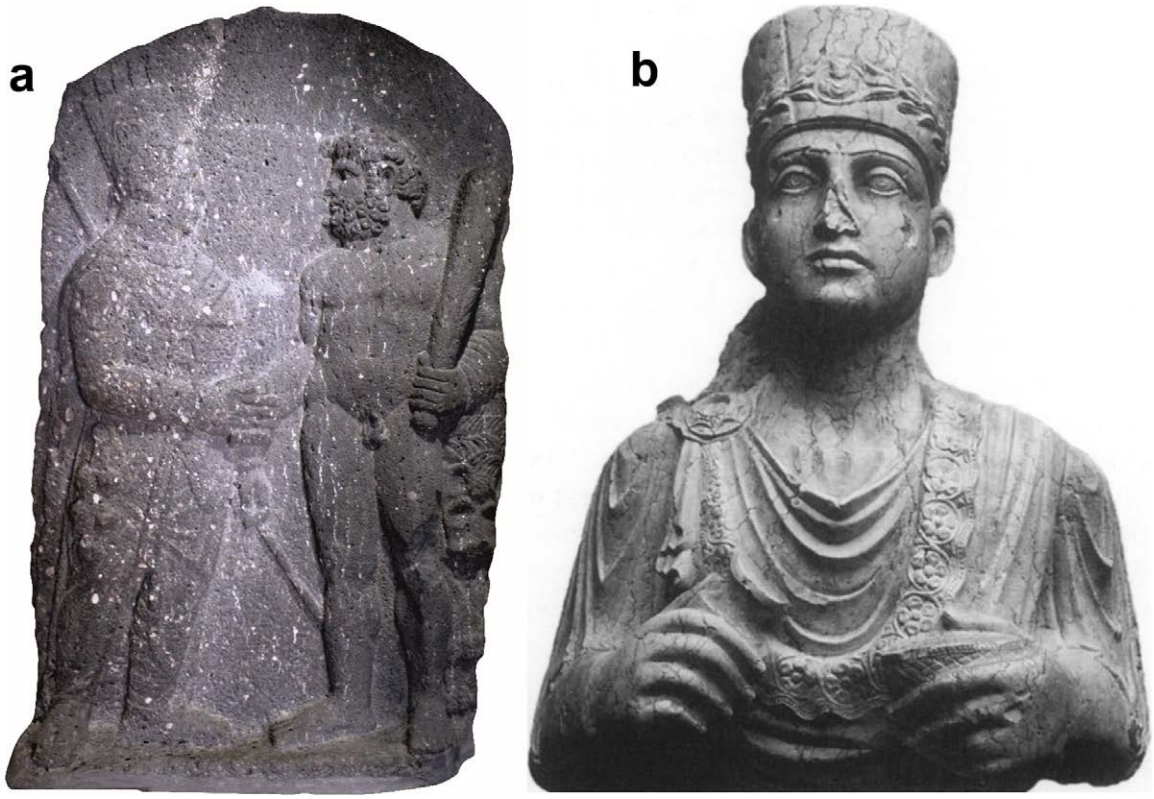

Figure 5: a) Relief of Antiochus I Theos (69-36 BC) and Hercules-Artagnes-Ares from Arsameia on the Nymphaeus in Commagene (southeastern Turkey), today in the Archaeological Museum of Gaziantep, acc. no. 107.26.00 (photograph: A. Çetingöz); b) Funerary stele of a Palmyrene priest in the Berkshire Museum at Pittsfield, Massachusetts, acc. no. 1903.7.2 (photograph: Courtesy of the Berkshire Museum, Pittsfield, Massachusetts, USA).

priest Tibol, from the British Museum, dated to the late 2nd century AD.[23]

Identical clothing can be seen in the figure of Seleucus I Nicator who appears on the right in the cult relief of the Gad (Fortune) of Dura, from the Temple of the Gadde from AD 158, housed in the Yale University Art Gallery in New Haven (Figure 6a).[24] Also similar is the relief of Maliku in the Louvre[25] (Figure 6b), which is dated to the first half of the 3rd century AD and ranks as one of the best representations of the local dress traditions in the Roman Near East.

The bust from Şanlıurfa shows a man holding his hands in the traditional position of local leaders and warriors, i.e. his right hand resting on what appears to be the hilt of a sword, also held with his left hand. He is an indigenous person, an inhabitant of Edessa. The clothes have a natural flow and even the drapery is skilfully executed, one could argue, by an artist educated according to Western taste.

The penetration of Graeco-Roman dress in Edessa is amply documented by the statue of a character depicted in the typical gesture of the philosopher, according to the Greek manner, i.e. with the right arm folded within the edge of the *chlamys*.[26]

The deceased depicted on our stela is of Syriac ethnicity: like the circle of his relatives and friends, he dresses, speaks and writes in the local language. It is noteworthy that neither the deceased of Edessa nor that of Palmyra, for whom the stela of AD 55 was sculpted, outright declare their status as soldiers, which is conveyed only through the visual communication of their representation and depiction.

No. 2

A statue possibly originating from Harran[27] (Aramaic Ḥarrānu, Greek Karrhai and Roman Carrhae), located 73 km south of Edessa, also shows a Roman soldier

[23] Height 61 cm, width 52 cm, depth 21 cm, acc. no. ME 125201. Cf. Seymour and Fowlkes-Childs 2019: 162-163, cat. no. 108.
[24] Height 46 cm, width 61.6 cm, depth 16.5 cm, acc. no. 1938.5314. Cf. Cadario 2020: 241, fig. 9.
[25] Height 44 cm, width 57 cm, acc. no. AO 2000.
[26] As in the Lateran Sophocles which is currently housed in the Museo Gregoriano Profano within Musei Vaticani, Vatican City; cf. Gasparri 2005-06.
[27] Segal 1970: 33, pl. 13b; Winkelmann 2009: 337; Karul *et al.* 2017: 422, top.

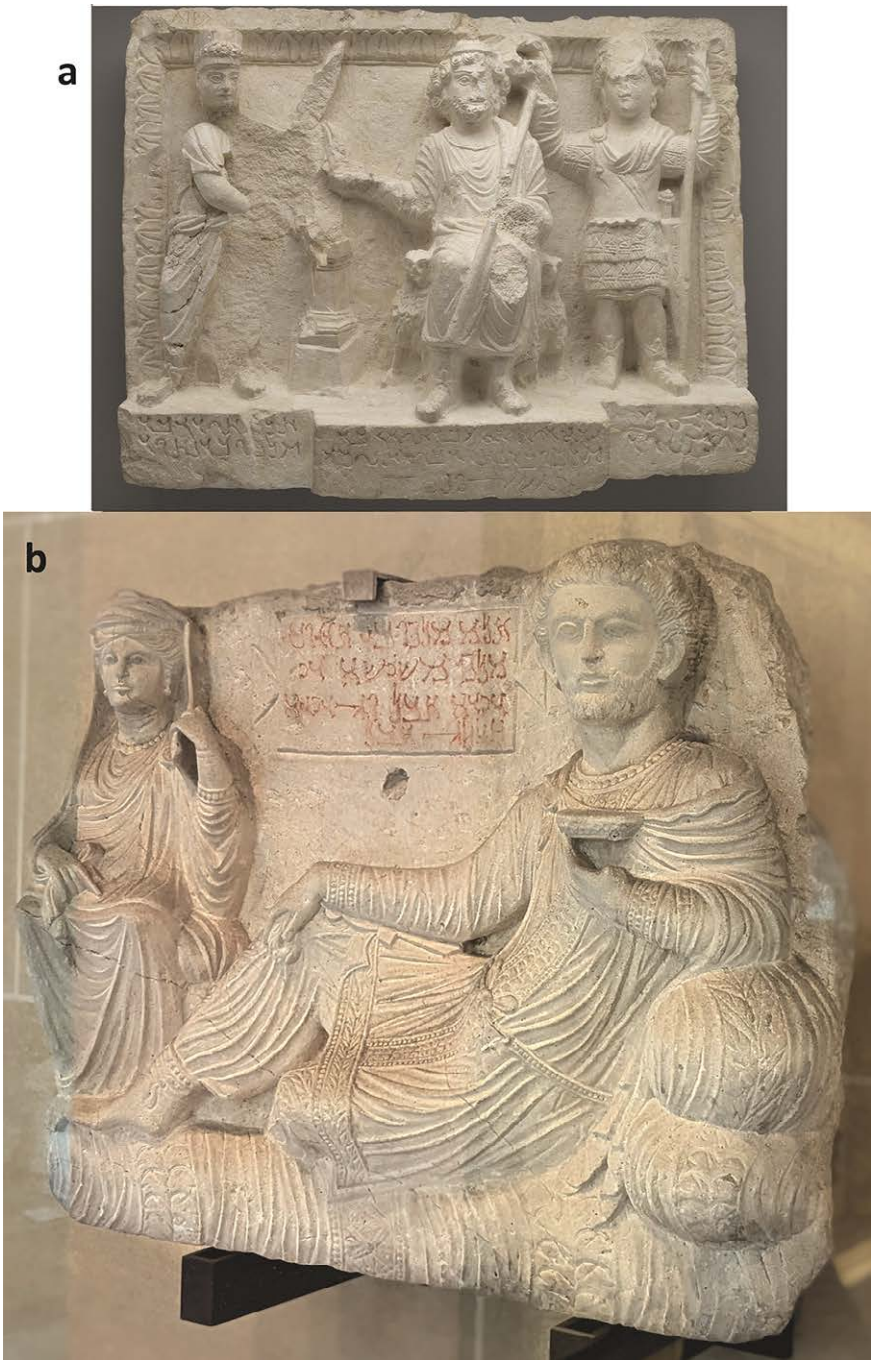

Figure 6: a) The cult relief of the Gad (Fortune) of Dura, from the Temple of the Gadde, Yale University Art Gallery in New Haven, CT, acc. no. 1938.5314 (photograph: Wikimedia Commons, public domain); b) Limestone funerary relief of a couple with a lying man and his wife, from Palmyra, Musée du Louvre, acc. no. AO 2000 (photograph: Shonagon via Wikimedia Commons).

of presumably high-rank[28] (Figure 7). According to Winkelmann, who devoted extensive attention to this sculpture, the head of the sculpture is not the original, having been added during its restoration.[29]

Here, too, we clearly see that the work performed by a local artist follows the conventions of local art.

The man has his left foot slightly forward. The fact that he is a soldier is indicated by the hands leaning on the hilt of the sword, which hangs from a smooth belt; this gesture is typical of Parthian iconography. The

[28] Height with plinth 193 cm, without plinth 175 cm, height of head 30 cm, width plinth 56 cm, width statue 28 cm, acc. no. 38.
[29] Winkelmann 2009: 337.

Figure 7: Limestone statue cat. no. 2 from Harran, Archaeological Museum of Şanlıurfa, acc. no. 38 (photographs: E. Laflı).

soldier wears trousers and shoes, which are typical for Roman Edessa, while his smooth robe reaches below the knee. Above, a *chlamys* is also bounded by a round fibula over the right shoulder: as before, the hem of the cloak hangs on the chest below it. This is also found, for example, in the votive limestone relief of a Palmyrene triad, with Baalshamin, master of the skies, in the middle, accompanied on his right by the Moon-god Aglibol and the Sun-god Malakbel (Yarhibol)[30] to his left. The cheekbones are clearly visible; the mass of the beard is created by a raised surface pierced by chisel strokes and the hair is divided into compact straight locks – not far from some depictions of Palmyra. The pupils are sunken. Among many other examples, the bronze bust of Claudius II Gothicus from the Capitoline Temple in Brescia, today in the Museo di Santa Giulia, offers a close and valid comparison. Also noteworthy is the conventional rendering of the drapery, entrusted to sparse furrows.

A similar way of rendering the folds is found in the first or second-century AD image of the god Nergal found at Hatra,[31] located 651 km southeast of Edessa. The shoes are rendered in a summary manner, but it is possible that some details were painted. The square base, with an elevated rear, does not bear any appreciable traces of an inscribed text, which could have originally been provided in colour.

[30] Height 60 cm, length 72 cm, depth 7 cm, Musée du Louvre, acc. no. AO 19801. Cf. Ghirshman 1962: 7, fig. 10.

[31] Height 90 cm. Formerly in the Museum of Mosul, Iraq, destroyed by ISIS in February 2015, cf. Ellerbrock 2021: 148.

Figure 8: Limestone statue cat. no. 3 from Edessa, Archaeological Museum of Şanlıurfa, acc. no. 5 (photographs: E. Laflı).

The sword, which was originally very long, falls into Winkelmann's type 3, who observed that swords of this kind were absent both from Palmyra and Hatra and seemingly resembled Kuschan weapons.[32] A sword of this type is depicted on Edessan coins bearing the image of Abgar X, dating to AD 242-244.[33]

No. 3

A limestone statue depicts a young soldier from Edessa, which emerges in the round from the flat background; the feet and the base on which they rested are missing (Figure 8).[34]

The soldier's face is no longer recognisable, with only a double crown of curls still clearly visible; the hair goes down to the shoulders. Among the various possible comparisons, we point to the Palmyrene stela at the Metropolitan Museum of Art.[35] Stylistically, the relief belongs to an early group of Palmyrene male funerary portraits dating to about AD 50–150, as evidenced by the treatment of the coiffure. A very similar male head from Hatra should also be considered.[36] The sword hangs from a strap worn above the belt, made up of only two ribbons or cords. The belt closure cannot be seen. The hem of the cloak rests on the right shoulder, forming a series of semicircular folds similar to the aforementioned stela from the Metropolitan, considered a characteristic element for the second quarter of the 2nd century AD.

The young man depicted here, most probably a commander, places his right hand on his right hip, where the dagger would have rested. Similar daggers[37] are known from other iconographic examples as the

[32] Winkelmann 2009: 349. Also cf. well-preserved swords from Illerup Ådal, Denmark.
[33] Winkelmann 2013: 248.
[34] Preserved height 107 cm, maximum height of head 22.5 cm, width 38 cm, maximum depth 40 cm, statue waistline 21 cm, acc. no. 5. Cf. Jacobs and Schütte-Maischatz 2006; Winkelmann 2009: 334-335; Karul *et al.* 2017: 423, top.
[35] 64.8x51.1x30.5 cm, acc. no. 2012.454.
[36] Ghirshman 1962: 37, fig. 51.
[37] Ellerbrock 2021: 89; Olbrycht 2015: 360-362.

Palmyrene stela at the Metropolitan and have been excavated in archaeological contexts. The left hand is facing the hilt of the sword, which, as usual, hangs on the left side.

The soldier wears a collar that is clearly discernible. Collars of various kinds are well known in Palmyrene sculpture.[38]

Three statues from the necropolis of Kızılkoyun in Edessa

After the expropriation of 600 houses between 2012 and 2017, around 75 rock-cut burials were excavated in the necropolis of Kızılkoyun in ancient Edessa, which is located on Tılfındır Hill, approximately 500 m north of the Plateau of Balıklıgöl (the so-called 'Pool of Abraham') in the modern centre of Şanlıurfa.[39] Furthermore, 76 rock-cut burials were excavated on the flanks of the acropolis (= 'Kale Eteği', literally 'castle skirt') on which the citadel of Edessa is located,[40] some of which also included mosaics (Figure 2).[41] These tombs were dated to the 2nd and 3rd centuries AD. One of them, tomb M51, was among the four richest and most complex tombs, on whose ceiling, only part of the frame of a mosaic remains.[42] Within the niches, two life-size sculptures depicted soldiers. These statues are preserved in the local museum, while copies have been relocated to their place of origin (Figure 9a).

They were interpreted as soldiers guarding the tomb,[43] and it is perhaps for this reason that the bases of the statues do not bear appreciable traces of any inscription. However, given their location, and in comparison with statues found in the tomb of Sumatai, it is also possible that they could have depicted the deceased.[44] Under the Severan dynasty, between AD 193 and 235, the equality between legionaries and auxiliaries led to the adoption of unitary equipment for all infantry, including the *lancea*, the longsword and the oval shield[45]. Like numerous other funerary representations, e.g. from Palmyra or Hatra, a banquet scene is depicted in the *arcosolium*;[46] unfortunately, it is poorly preserved and its details unclear.

Finally, in a third tomb in the same necropolis, the excavators of this archaeological area intended to display a mannequin bearing a military uniform and Roman equipment (Figure 9b).

The next three catalogue entries will introduce three statues from this particular grave in Edessa.

No. 4

A limestone statue originally placed to the left of the entrance of tomb M51 preserves its head in a highly damaged state, while the hands resting on the hilt of the sword are missing (Figure 10).

Like the previous statue (no. 3), which we believe to be of a commander, this one stands on a quadrangular base, with his left foot slightly forward.

The sculpture no longer bears any recognizable characteristic features: the soldier wears a large open surcoat over a sort of tunic that goes down below the knee, fastened at the waist by a belt.[47] Two ribbons hang from the brooch that closes the belt – a detail also found on the Parthian rock relief of Vologases in Bisotun, Iran, who is depicted frontally, holding a bowl and sacrificing at an altar, flanked by two attendants carved on the sides of the rock.[48] Another, narrower belt, probably made of leather and engraved with oblique motifs that form lozenges can be seen below the belt or *cingulum*, from which the soldier's sword hangs. A decoration consisting of rows of circular elements, seemingly in relief, is characteristic of his garment. These elements are also present on the trousers, but they are not recognizable on the footwear. According to Henri A. Seyrig, these would have been woven decorations; a fragment of fabric bearing this motif was found in Palmyra.[49] On the chest, this decoration of the dress forms a H-shaped motif. Of note, in the sculptures of Edessa, these bands of embroidered or woven elements in relief are formed by three parallel rows, while only one row appears, for example, in Palmyra, and different motifs are found elsewhere.

Like the other individuals depicted in the statues of the Archaeological Museum of Şanlıurfa, this one wears the typically Oriental *anaxyrides*. Since the Archaic period, it was widely believed that these trousers were typical of the Scythians, Persians and various other populations that lived throughout Anatolia and Asia.[50] The *anaxyrides* are also typical of Oriental deities, such as Attis, Cautes and Cautopates, who are often depicted wearing them in sculpture and vase painting.

[38] Krengel 2017: 46.
[39] The necropolis of Kızılkoyun is epigraphically very rich, being similar to other necropoleis in the area, such as the necropolis at Perrhe (Örenli) near Adıyaman, a source of many funerary inscriptions, as well as Zeugma in Gaziantep.
[40] Çetin 2017; Demir 2019.
[41] Önal 2017: 20-21.
[42] Demir 2019: 259.
[43] Demir 2019: 253: in these front entrances, there are niches for the statue dressed as an armoured soldier, to the left and to the right of the entrance.
[44] Another statue of a soldier was found in tomb M16, this one facing the main scene and apparently leaning on a spear. An oval shield can be found at its feet.
[45] Rocco 2012: 556.
[46] Dirven 2005; 2015.
[47] On Parthian belts, see Sarkosh Curtis 2001.
[48] Ghirshman 1962: 53, fig. 66, dated to the 1st or 2nd century AD.
[49] Seyrig 1937: 20.
[50] E.g. Xen. *An.* 1.5.8 etc.

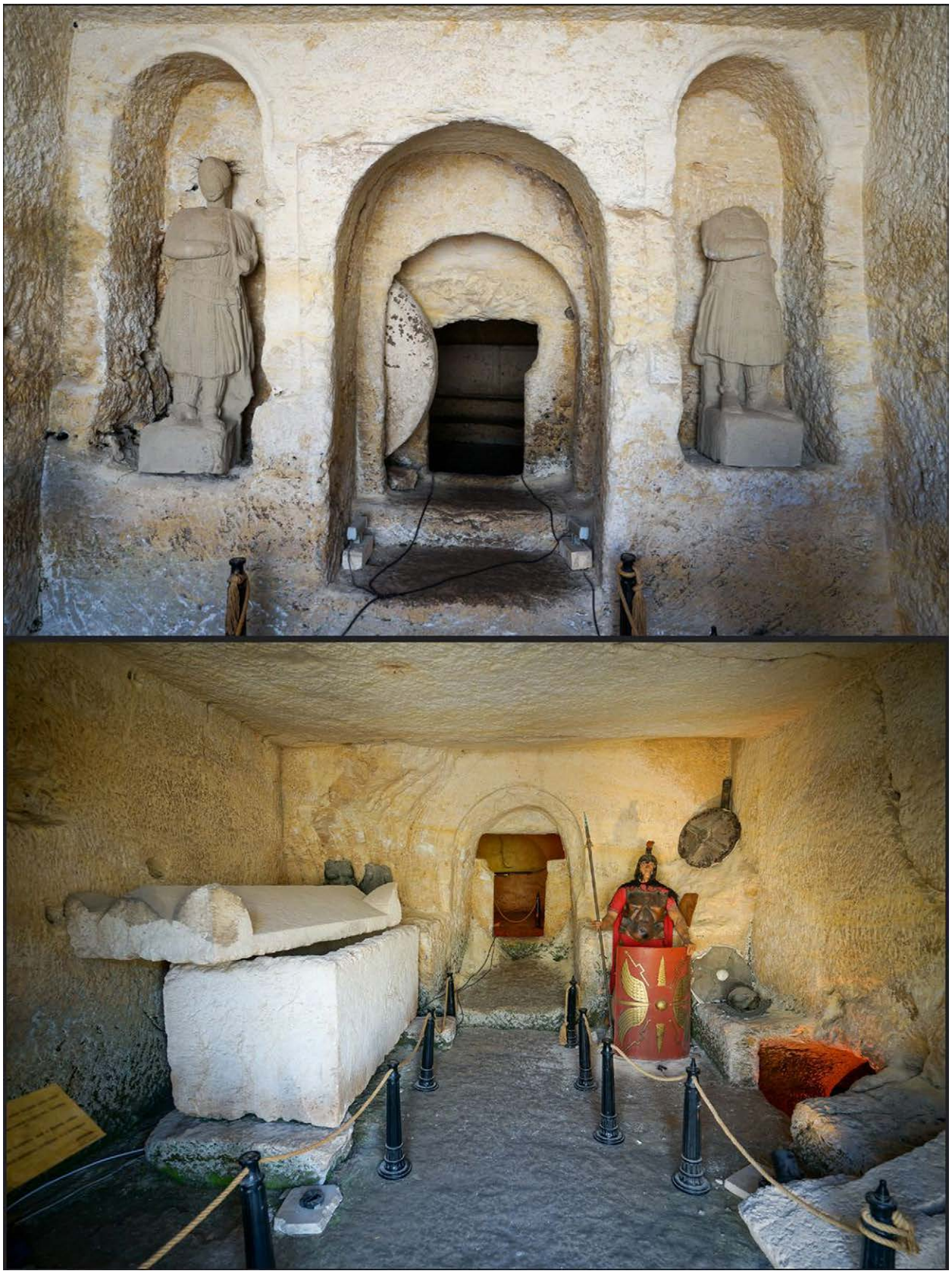

Figure 9: Roman tomb in the necropolis of Kızılkoyun in Edessa with the statues (photographs: © Stuart McCunn, after https://api.flickr.com/photos/archstanton/52753135142 and https://api.flickr.com/photos/archstanton/52754081690).

Figure 10: Limestone statue cat. no. 4 from Edessa, Archaeological Museum of Şanlıurfa (photographs: E. Laflı).

No. 5

Another limestone statue, whose head was not recovered, was located in the second niche of the same tomb, on the right (Figure 11). This statue better preserves some of its details.

A narrow ribbon hangs almost vertically from the brooches that close it, while a kind of collar can be seen around the neck. The folds of the clothes are rendered in a more plastic way compared to the statue of the Roman soldier in Figure 7 and increase in depth in the lower part of the surcoat.

The trousers are inserted into soft ankle boots, which towards the toe are also decorated with a band of four rows of raised dots. The shoes are tightened at the ankle by a ribbon secured by two circular brooches. The trousers also bear the same vertical decoration.

The internal layout of tomb M51 of the necropolis closely resembles the so-called 'Pognon's Cave' at the Sabian pagan site of Sumatar, which was decorated with a horned pillar – the symbol of the god Sina – unfortunately already difficult to discern when Henri Pognon visited and described it in the early 20th century[51] (Figure 12). In 2009, to get a closer date, Winkelmann attempted to obtain drawings from the present figures.[52]

[51] Pognon 1907: 23-38.
[52] Winkelmann 2009: 352-355, fig. 2-6.

Figure 11: Limestone statue cat. no. 5 from Edessa, Archaeological Museum of Şanlıurfa (photographs: E. Laflı).

The larger-than-life-size figures are rigidly frontal and are placed in niches on the sides of a central rectangular apse. It could also be the case that the depictions found within the niches of tomb M51 represent the deceased, instead of guards placed to guard the tombs. In Sumatar, the iconographic details have been lost over time, not least due to the long reuse of the cave. As Pognon already recognised, among the numerous Old Syriac inscriptions that covered the walls, the few that could be read and interpreted mention several ancient Aramaic male given names: 'Wa'el' and 'Wa'el, son of Wa'el', as well as 'Hafsai, son of Bar-Kolba'. The latter appears to have been Aurelius Hafsai, a high-level dignitary of the late 2nd or 3rd century AD.[53] The inscriptions that seemingly identify the deceased therefore appear to offer a timeline of chronological comparison for the sculptures of Edessa as well.

No. 6

Another limestone statue, missing the head, the neck, the left arm, the right hand and the legs beneath the ankles, as well as the base, is the last in our catalogue of sculptural material in the Archaeological Museum of Şanlıurfa (Figure 13).[54]

Two bands, each made of three rows of decorative globes, appear on the dress. They also continue on the trousers and can be traced to the point they are tucked into the missing shoes. The belt is tied with circular

[53] Drijvers 1980: 131.

[54] Preserved height 138.5 cm, width 55.5 cm, depth 38.5 cm.

Figure 12: A large cave at Sumatar, known as Pognon's cave (photograph: Klaus-Peter Simon via Wikimedia Commons, CC BY-SA 4.0).

metal plates, joined by hinges and fixed by two ribbons which, after having been woven into a double knot, hang vertically from two quadrangular brooches with a semicircular front[55] (Figure 14a).

There are several similar belts on the Roman sculptures in Hatra (Figure 14b-e): a pair of identical brooches was found on the belt of Uthal, king of Hatra, formerly housed in the Museum of Mosul, Iraq (destroyed in February 2015 by ISIS), dated to the 2nd century AD (Figure 15a).[56]

The same type of belt is worn by the left figure in the façade niche of the Al-Lat Temple in Hatra (Figure 15b), described by the museum as 'young god with banner, Building A, central courtyard in front of the altar, 200 AD, Height 140 cm. The Iraq Museum in Baghdad'. A very similar belt is also worn by a seated male character depicted in a statue in the Hatra Museum, also destroyed by ISIS in February 2015[57] (Figure 15c). The sacrificing king depicted at Bisotun and identified as Vologases IV, who reigned between AD 147 and 191, also wore a similar belt.[58] According to Vesta Saarkhosh Curtis, 'the depiction of belts on Parthian-period sculpture and the elaborate designs indicate that they were not simply precious items of clothing but that they also had a special significance for those who wore them'.[59] The motif does not only appear in elements of clothing, but is also used in architecture: for example, in a sort of limestone *aedicula* preserved in the Iraq Museum in Baghdad.[60]

Also noteworthy is the precision with which the sword scabbard is depicted, corresponding to a motif present in the entablature of tomb no. 36 in Palmyra, dated between AD 210 and 220.[61]

[55] By comparison with Roman military sculptures from some other places, there is a certain resemblance to the *balteus* with *phalera* typical of the 3rd century AD. Also notable is the similarity between the way the soldier carries the sword here and the way this aspect is present in Roman sculpture and painting from the 4th century AD onwards, i.e. two belts, one of them slightly narrower used to carry the sword.

[56] Ghirshman 1962: 89, fig. 100. An Aramaic inscription on the base of the statue reads 'The Image of King Uthal, the merciful, noble-minded servant of God, blessed by God'. Other details about this king's life, including the dates of his reign, remain obscure.

[57] Cf. Bonnier n.d.: image no. 33.

[58] Saarkhosh Curtis 2001: 301.

[59] Saarkhosh Curtis 2001: 308. For Roman military belts, cf. Hoss 2012: particularly 31-38.

[60] Cf. Bonnier n.d.: image no. 28.

[61] Al-As'ad and Schmidt-Colinet 2005: 54.

Figure 13: Limestone statue cat. no. 6 from Edessa, Archaeological Museum of Şanlıurfa (photographs: E. Laflı).

The sword was secured by two straps, in the typical Parthian manner. One of these ran from the apparently smooth wide strap, which went down obliquely to the point indicated by the stud decorated with a quadrupedal flower in relief. The same strap wrapped around the sheath, passing through its visible front part under a (likely metallic) plate which started from the edge of the sheath itself. Thus, the plate seems to have been affixed by a second transverse metal band.

The scabbard is, therefore, depicted with great accuracy; however, the sword is missing, nor can any trace of the hilt, which appears to have been broken off, be seen.

Conclusion: a typical Edessan garment during the Roman period

According to Cynthia Finlayson, 'for millennia, textiles have been utilized by human civilizations to define gendered identities as well as ethnic, religious, and political affiliations'.[62] Among the statues we have considered from Roman Mesopotamia, some bear clear decorative elements in their dress. The statues from Edessa often wear generally Parthian costume, showing rows of three protruding 'buttons', while the Palmyrene statues exhibit only one such row.[63] It is possible that this particularity was also highlighted through the use of colour.

A statue was particularly expensive and, therefore, reserved for people of high status and considerable wealth. The statues in the Archaeological Museum of Şanlıurfa come from particularly elaborate tombs of Roman Edessa. Although generally a later development, in the numerous mosaic figures in the funerary context in Edessa it seems that a solid colour was preferred for clothing. Instead, judging from the representations of the sword and dagger, on the sculptures mentioned above and belonging to soldiers, the tunic is decorated with two bands of three rows of half-globes. If other precious elements of clothing, for example, the elaborate

[62] Finlayson 2004: 60.

[63] This particular motif was used to decorate the long clothes of three armed male characters at nos 1-3, and thus, it seems to be a specificity of the military dress in Edessa, being perhaps part of a 'local fashion'. However, this particular motif is not found on nos. 4-6.

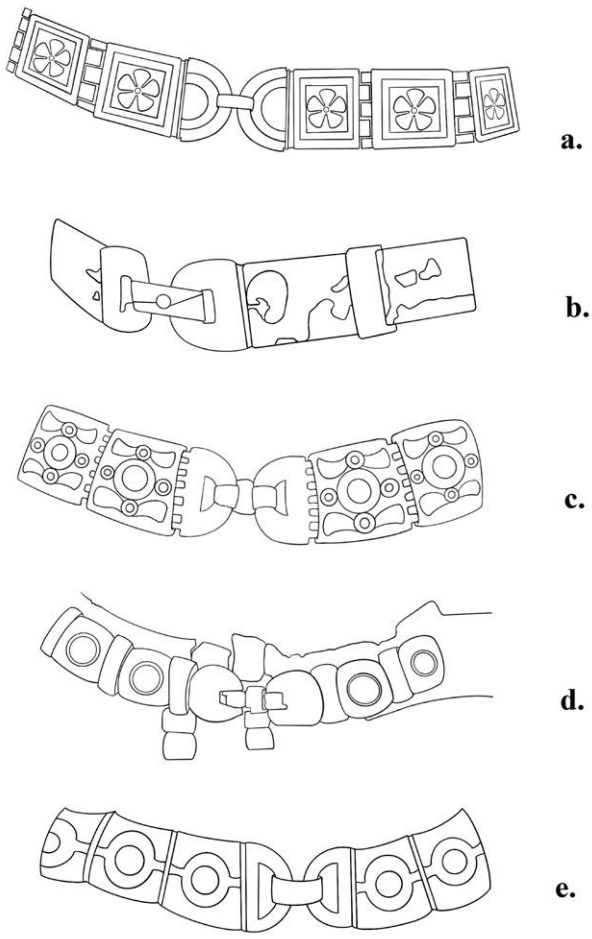

Figure 14: Belt types on the Roman sculptures in Mesopotamia: a. from Edessa; b. from Hatra; c. from Palmyra; d–e. from Baghdad (drawing: L. Özlüoğlu).

belts or the collar, are common to the Parthian area, this detail seems to be exclusive to Edessa. Unfortunately, at present, there are no discoveries of fragments of fabrics known to have originated from this area, which would allow us to have an idea of how these garments were actually made.[64]

Therefore, it may be possible to identify elements of various origins and provenance in the Edessan Roman costume. Some iconographic conventions should be ascribed to the generically 'Mesopotamian' background, such as the banquet scene, or the choice of the stela with the half-length image.

Some details, such as the edge of the cloak that falls from the circular brooch onto the chest find numerous comparisons, especially – but not only – in Palmyra. The insistent representation of this element demonstrates the desire to realistically reproduce the details of the dress. The same can be said regarding the weapons, which are rendered in great detail.

The study is based on observing a number of cultural contacts that occurred on the eastern borders of the Roman Empire and how this affected ancient clothing patterns. A potential site for this cultural contact – which was also an important centre of Graeco-Roman and Parthian art – was Dura Europos in Syria, located 383 km southeast of ancient Edessa. Garments and clothing traditions reflected in iconographic materials from Dura-Europos, especially those figured on graffiti and paintings, are similar to the sculptural material from Edessa.[65]

We have attempted to highlight some close similarities between the statues and reliefs from Edessa and those from Palmyra and Hatra. They reveal a circulation of models common across the Mesopotamian area, which coincides with the last phase of the Parthian rule. Furthermore, we have identified an element of clothing that seems exclusive to the sculptures of Edessa and, therefore, most likely reflects a local fashion during the Roman period.

Appendix: a limestone high relief from Edessa (?) in the Museum of Tarsus in Cilicia

It is widely known that the museums of present-day Turkey, not unlike museums in other parts of the world, preserve pieces that are not exclusively of local origin. The Museum of Tarsus in Cilicia (southern Turkey), located ca. 410 km west of ancient Edessa, preserves a high relief that presents a male individual, sculpted in a yellowish-creamy limestone that seems identical to that of the statues of Edessa (Figure 16).

Bearing the acc. no. 993-4-1 (or 1.4.1993), its measurements are as follows: preserved height 63 cm, width 26 cm, depth 27 cm. The relief was acquired by Mr Nuri Aybaş, a local poet who resided in Tarsus, in 1993. The head and neck, part of the right arm, the end of the left arm (to which a completion fixed with a pin was attached) and the lower part of the legs are all missing.

[64] In some sources one can find references to Edessa and its ancient textiles. For example, according to legend, the Mandylion was an image of Christ's face imprinted on a towel, preserved in Edessa. It is known that centres of traditional Syrian textile manufacturing such as Edessa and Aleppo were significant in the post-Byzantine centuries, but began to lose their market outlets in Europe from the late 18th century onwards. It is widely known that felt is one of the oldest known textiles of Urfa; in Ottoman Urfa some baths had areas dedicated to feltmaking, making use of the steam and hot water that were already present for bathing purposes. The authors were unable to find sufficient scholarly literature on the traditional garments of Edessa (or, later, of Urfa) to draw more than tentative conclusions.

[65] Brody and Hoffman 2011: 324, 332, 334, 340-344, 349, 352, 374; for the archaeological evidence from Dura-Europos, cf. James 2004: particularly 49-100.

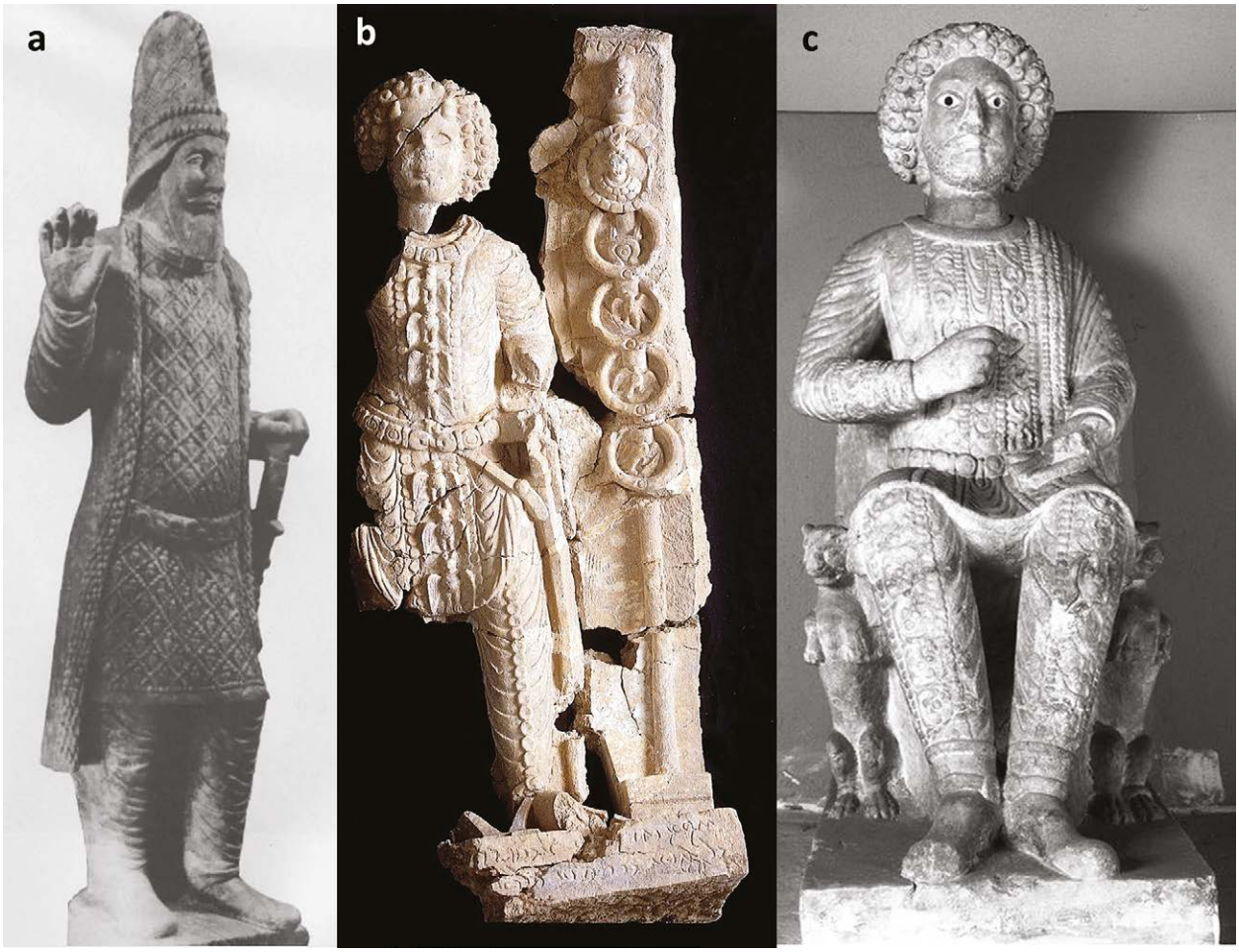

Figure 15: a. Statue of Uthal, king of Hatra, formerly in the Museum of Mosul, Iraq (destroyed in February 2015 by ISIS) (photograph: after https://gatesofnineveh.wordpress.com/2015/03/03/assessing-the-damage-at-the-mosul-museum-part-2-the-sculptures-from-hatra/); b. Figure in the façade of the Al-Lat Temple in Hatra. Height 140 cm. The Iraq Museum, Baghdad (photograph: © Erick Bonnier, after https://camnes.org/hatra-statuary-salvage-project/ and https://colorsandstones.eu/2022/03/12/hatra-sculptures/); c. Seated male statue in the Hatra Museum, Syria (photograph: © Erick Bonnier, after Bonnier n.d.).

The back of the relief is not worked and is quite thick. The person depicted is wearing a cloak over a tunic, as well as Oriental trousers; we note the emphasis with which the edges of the cloak, opening to his chest, are indicated. The figure's left leg stands loosely, while he is supported by his right foot. One can see his *chlamys*, thrown backwards, on his long dress. The figure's right arm is bent at the elbow so that his right hand is holding the edge of the *chlamys*. The character is also holding an object (likely a sword or a dagger with a broken tip) in the left hand, which is resting on his left leg, while his left arm is covered up to the elbow by the *chlamys*. There is a (further?) dagger (sheath) inserted into the right side of his belt, which bears the knot of Hercules.

In the same way, the edges of the cloak are clearly visible on the statue of the banqueter in the *hypogeum* of Athenatan, *exedra* of Maqqai (dated to AD 220) in Palmyra.[66] The lower part clearly shows the legs wrapped in the fabric, although the rows of (fabric?) buttons that we have presented on the other Edessan statues[67] are here completely missing.

Another example, a male statue clad in Oriental military dress, is preserved in the Archaeological Museum of Mersin (acc. no. 90.23.131) and shows similar characteristics to the Tarsus example under consideration. The clothes of the Mersin example are long enough to reach the character's knees and he wears trousers as well. Moreover, the Mersin warrior is holding his dagger or his sword worn on the left side, with the right hand directed towards the right part of his chest.

[66] Ghirshman 1962: 78, fig. 92.
[67] Also cf. Jacobs and Schütte-Maischatz 2006: 359, 367-368, fig. 1-6.

Figure 16: Limestone high relief from Edessa (?) in the Museum of Tarsus in Cilicia, acc. no. 1.4.1993 (photographs: E. Torum).

The rigid frontality and the way of rendering the folds of the dress (which almost seem to be the result of a folding of the fabric itself) bring the plasticity of the example from Tarsus closer to that of other statues in Edessa. The belt ends with two long sections that descend from a knot recalling those of the three Palmyrene deities Aglibol, Baalshamin and Malakbel.

The soft and natural U-shaped folds of his garment – especially on the legs – allow us to date the statue from Tarsus, exclusively on stylistic grounds, to the first half of the 3rd century AD.

We cannot tell, however, why and when this relief from Tarsus, and possibly the other from Mersin, were brought from Edessa to a Cilician city in the west.

Acknowledgements

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Permission to publish the statue conserved at the Museum of Tarsus was granted by the Directorate of the Museum of Tarsus to Ms. Emel Torum on 16 July 2013, under permit 60364499-155.01-E.149289. The photos of the statue, i.e. Figures 16a–b, were taken by E. Torum in August 2013, whom we would like to thank for allowing the use of the photos in this paper.

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Abbreviations/editions

CIS = Chabot, J.-B. (ed.) 1926-1947. *Corpus Inscriptionum Semiticarum, Pars secundo, Tomus III: Inscriptiones Pahmyrenae*. Paris: Imprimerie nationale.

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This volume primarily consists of a collection of papers presented at the conference 'Textiles and War in Europe and the Mediterranean from Prehistory to Late Antiquity', held in Bucharest in May 2023. Its main goal is to explore the opportunity to establish a new and well-defined direction of academic investigation: the autonomously conceived research of the textile items used or manipulated by prehistoric and ancient armed groups.

The book revolves around two central issues. The first is outlining the main sources and methodologies with the potential to provide noteworthy results, starting by sketching a map of the current state of the research in the field. The second is topical and deals with highlighting a few relevant themes that could be tackled, such as particular studies on specific textile items used in the military field, the systems of production and acquisition of garments and other textile materials for the armies, the expression of military rank and status through textile items, the economic and cultural effects of military campaigns in the field of textiles acquisition and consumption.

The 13 papers operate with a wide array of archaeological, iconographic and written sources to examine various aspects of the use of textiles and leather by armed individuals and armies in diverse regions of the prehistoric and ancient world, from western Iberia to northern Mesopotamia and from the bogs of northwestern Europe and the rugged mountains of the Balkan peninsula to the Arabian desert, preserving however as focal points Greece, Rome and the Italian peninsula.

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